U.S. DEPARTMENT OF COMMERCE
National Technical Information Service

PB-259 458

An Investigative Study of the California Experience in Airport Noise Regulation

California Univ, Davis

Prepared for

Environmental Protection Agency, Washington, D C

12 Jun 75

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PB 259 458

AN INVESTIGATIVE STUDY OF THE CALIFORNIA EXPERIENCE IN AIRPORT NOISE REGULATION

by

Harrison C. Dunning

Final Report to the U. S. Environmental Protection Agency

DAVIS PROGRAM IN LAW AND THE ENVIRONMENT

University of California, Davis

June 12, 1975

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U. S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

119

BIBLIOGRAPHIC DATA SHEET	1. Report No.	2.	3. Recipient's Accession No. PB-259 458

4. Title and Subtitle

An Investigative Study of the California Experience in Airport Noise Regulation.

5. Report Date

June 12, 1975

6.

7. Author(s)

Harrison C. Dunning.

8. Performing Organization Rept. No.

9. Performing Organization Name and Address

California University
Davis, California

10. Project/Task/Work Unit No.

11. Contract/Grant No.

12. Sponsoring Organization Name and Address

13. Type of Report & Period Covered

14.

15. Supplementary Notes

16. Abstracts

This document constitutes the final report to the U.S. Environmental Protection Agency as an independent, "outsider" investigation and appraisal by individuals with no prior involvement in the California experience in airport noise regulation. The work performed was conceived and carried out primarily as a field study by a team of seven law students from the University of California at Davis.

17. Key Words and Document Analysis. 17a. Descriptors

*Aircraft noise
*Airports
*Regulations
Environmental surveys
California
Noise pollution
Evaluation
Management methods
Interviews
Data acquisition
Records
Impact
Noise reduction
Students
Universities

17b. Identifiers/Open-Ended Terms

Airport noise
Field studies
State programs

17c. COSATI Field/Group 13B, 20A, 1E

18. Availability Statement National Technical Information Service Springfield, VA 22161	19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 119
	20. Security Class (This Page UNCLASSIFIED	22. Price PC$5.50/ MF$3.00

FORM NTIS-35 (REV. 10-73) ENDORSED BY ANSI AND UNESCO. THIS FORM MAY BE REPRODUCED USCOMM-DC 8265-P74

AN INVESTIGATIVE STUDY OF
THE CALIFORNIA EXPERIENCE IN AIRPORT NOISE REGULATION

by

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and
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Final Report to the U.S. Environmental Protection Agency

(Prepared Pursuant to EPA Contract Number 68-01-2645)

EPA Project Officers
Elizabeth Cuadra (June 1974 - August 1974)
Henry Thomas (January 1975 - June 1975)

June 12, 1975

PREFACE

This document constitutes the final report to the U.S. Environmental Protection Agency pursuant to EPA contract number 68-01-2645 signed June 12, 1974. It is, as was anticipated in the request for proposals for the contract, an independent, "outsider" investigation and appraisal by individuals with no prior involvement in the California experience in airport noise regulation.

The work performed was conceived and carried out primarily as a field study under the auspices of the Davis Program in Law and the Environment. In order to assess the way in which the California system for airport noise regulation has been implemented, seven airports were selected for special study. Between June 12, 1974, and June 24, 1974, a team of seven law students from the University of California at Davis was assembled. For the following ten weeks, under the direction of the author, this team interviewed hundreds of officials and private citizens and reviewed files in scores of public offices in order to develop the factual basis necessary to evaluate the impact of the state regulatory system. In many instances this information has been updated to early 1975.

The yeoman's service of the students who constituted the field research team is gratefully acknowledged. The team consisted of Douglas Dodds (San Francisco International Airport), Christopher Dworin (San Jose Municipal Airport), William Hitchcock (Orange County Airport), Gregory O'Leary (San Diego's Lindbergh Field), Elizabeth Ratner (Metropolitan Oakland International Airport), Victor Ryerson (Sacramento Metropolitan Airport) and William Waterhouse (Ontario International Airport). In addition to field research, excellent editorial advice on the text of the final report was provided by William Hitchcock, Gregory O'Leary and William Waterhouse.

The author also gratefully acknowledges the generous assistance of the hundreds of people who provided both facts and ideas in the course of being interviewed. Of particular assistance at the state government level were Richard G. Dyer of the Division of Aeronautics in the Department of Transportation, Edward J. Connor, Jr. of the Legal Division in the Department of Transportation, and Larry C. King and Nicholas C. Yost of the Environment Unit in the Department of Justice. Excellent support was provided in the formulation and field stages of the study by Elizabeth Cuadra of the U.S. Environmental Protection Agency. Secretarial services were provided with unfailing good spirits by Linda Cannell and Shellee Husman, who often worked under considerable time pressure. Any errors of fact or of interpretation are, of course, the responsibility solely of the author.

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"We envision the [California airport noise] regulations promulgated as a commendable progressive state-sponsored effort toward the future safety and protection of its citizenry from the ever increasing aircraft produced noise nuisances. We deem it most worthy of advisory consideration to the EPA which is now engaged in promulgating its advice to FAA pursuant to the Noise Control Act of 1972." East, J. for the three-judge federal court in Air Transport Association v. Crotti, 389 F. Supp. 58, 62 (N.D. Cal. 1975).

INTRODUCTION

Environmental protection placed low on the American list of public priorities until well into the 1960s. In 1967, for example, a detailed study of the problems of "governing nature" noted that the task of "saving . . . nature from man for man's own sake in the future" had hardly begun.[1] But by the end of the decade there had been a sharp change in national mood. Popular books like The Population Bomb[2] added to the growing unease many individuals felt over the future consequences of continued rapid population growth, intensified natural resource exploitation and an exploding technology that some viewed as newly uncontrollable by the society at large. This unease was vividly demonstrated when nearly twenty million people participated in "Earth Day" on April 22, 1970.[3] And the new national mood was sufficient to prompt a conservative President to state in the 1970 State of the Union message:

> The great question of the seventies is, shall we surrender to our surroundings, or shall we make our peace with nature and begin to make reparations for the damage we have done to our air, to our land, and to our water?[4]

Both in the U.S. Congress and in state legislatures the new priority of environmental protection brought forth new legislation. At the federal level the National Environmental Policy Act of 1969[5] was passed and the Environmental Protection Agency was formed.[6] Later the Congress enacted the Noise Control Act of 1972,[7] pursuant to which the EPA must submit to the Federal Aviation Administration

> proposed regulations to provide such control and abatement of aircraft noise and sonic boom . . . as EPA determines is necessary to protect the public health and welfare.[8]

Among the states California acted with particular vigor in response to the widespread public concern for environmental protection. Legislation modeled upon the National Environmental Policy Act was enacted in 1970[9] and, two years later, it was given a very broad reading by the

Supreme Court of California.[10] The standards for planning by local governments were rewritten to reflect environmental concerns.[11] Particular attention was paid to the protection of "silence" as a natural resource of the state,[12] and to the massive assault on silence presented by airports with frequent jet air carrier service. Legislation was adopted which required the state's Division of Aeronautics (then, "Department" of Aeronautics)[13] to develop airport Noise Standards.[14] Airport land use commissions which previously had existed only on paper were brought to life and airport noise was made a major part of the commissions' planning responsibility.[15] And "noise elements" were added to the list of mandatory "elements" or subjects which local governmental planning bodies are required to include in their general plans.[16]

By 1971 through these standards, commissions and the noise element requirement California had on paper a fairly comprehensive system for dealing with airport noise problems.[17] This report attempts, on the basis of field information gathered primarily from the State Division of Aeronautics and from seven large California airports,[18] to describe and analyze the implementation of this system during the early 1970s. On the basis of this description and analysis, findings are made and recommendations are submitted for consideration by the EPA.

PART I: THE CALIFORNIA AIRPORT NOISE STANDARDS

A. Introduction

Although the California airport Noise Standards were developed administratively, they have a statutory foundation. An enactment of September 6, 1969, directed the Division of Aeronautics to

> . . . adopt noise standards governing the operation of aircraft and aircraft engines for airports operating under a valid permit

> issued by the department [division] to an extent not prohibited by federal law. The standards shall be based upon the level of noise acceptable to a reasonable person residing in the vicinity of the airport.[19]

It was to be the function of the county where the airport was located to enforce the adopted Noise Standards,[20] and their violation by an aircraft was to be deemed a misdemeanor punishable by a fine of $1,000.[21] A limitation was added that the Noise Standards were to be inadmissible as evidence in any eminent domain action or any action for injury, damaging, or taking by reason of the operation of aircraft.[22]

The new statute gave remarkably little guidance to the Division of Aeronautics and to the advisory committee which was created[23] to assist in preparation of the Noise Standards. Only two guidelines were included in the legislation:

> (a) Statewide uniformity in standards of acceptable airport noise need not be required, and the maximum amount of local control and enforcement shall be permitted (and)
>
> (b) Due consideration shall be given to the economic and technological feasibility of complying with the standards promulgated . . .[24]

Plainly the California legislature expected that promulgation and implementation of the new airport Noise Standards would be swift. The Division of Aeronautics was to report back to the legislature by December 31, 1970,[25] and the regulations were to go into effect December 1, 1971.[26] Implementation thus originally was expected to begin about two years after the initial legislative enactment. In the nearly six years since that enactment, however, implementation has proceeded at a snail's pace. Indeed, major airports in California today operate in undisturbed non-compliance with the major provisions of the Noise Standards. No effective sanction has been brought to bear to force compliance with state law. Three principal factors seem to explain this situation:

1) The Noise Standards require complex and expensive noise monitoring systems at noise problem airports, and -- by an unjustifiable administrative gloss -- the standards have been interpreted to require the development of airport noise abatement plans only after these monitoring systems have been installed by the airport and approved by the state, steps which usually have involved very long delays;

2) Opponents of effective state regulation of airport noise obtained a statutory delay of the effective date of the major portions of the Noise Standards and then, on the eve of the "final" effective date, they filed a lawsuit which has forestalled many actions which might otherwise have been taken to enforce the Noise Standards; and

3) The state Division of Aeronautics, confronted by the inevitable inertia of airlines, pilots, and numerous county officials and airport managers, has taken a generally passive attitude with regard to its responsibilities under state law.

Despite this poor overall record, there are occasional bright spots on the California airport noise regulation scene. One airport, the Orange County Airport near the City of Newport Beach, has implemented a successful noise monitoring program and has begun to use monitoring data to change patterns of behavior in a way that seems to have improved the noise environment of the airport. Several other airports now have noise monitoring systems which may lead to successful regulatory activity in the near future. And there is some hope that, if either the legal challenge to California's regulatory system is disposed of in a manner preserving a significant state role or the federal government gives to the states power to deal effectively with airport noise problems, the state government may adopt a more aggressive enforcement posture.

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In order to support these general conclusions, Part I of this report will proceed with an analysis of the major provisions of the California Noise Standards; a summary of the current noise monitoring programs at the seven airports selected for special study; and discussion of noise abatement measures at these airports which are linked to noise monitoring or, more generally, to the methodologies for noise abatement contemplated by the Noise Standards.

B. The Noise Standards

The California Noise Standards were prepared by a noise standards advisory committee which had the technical assistance of a well-known acoustical consulting firm,[27] and they were promulgated by the state Division of Aeronautics on November 28, 1970.[28] They include over twenty two pages of text, which together with six pages of figures provide a scheme rich in both technical sophistication and regulatory detail. Although they are "designed to cause the airport proprietor, aircraft operator, local governments, pilots and the department [Division of Aeronautics] to work cooperatively to diminish noise,"[29] they establish a procedure which is mandatory for all airports required to operate under a permit issued by the Division of Aeronautics.

1. The "Community Noise Equivalent Level" (CNEL)

A premise of the regulatory philosophy adopted by the Noise Standards is that to deal effectively with airport noise quantification is necessary. That is, the statutory reference to "the level of noise acceptable to a reasonable person residing in the vicinity of the airport"[30] must be given a numerical value.[31] Further, this numerical value must be one which can be used to prepare a noise impact boundary (or "contour") surrounding an individual airport. The numerical value adopted is a "community noise equivalent level" (CNEL) of 65 decibels, a level deemed appropriate for reasonable persons residing in urban residential areas "where houses are of typical California construction and may have windows partially open."[32] The CNEL is calculated as an average daytime noise level during a twenty four hour day, "adjusted to an equivalent level to account for the lower tolerance of people to noise during evening and night time periods."[33] That is, evening noise is weighted more heavily than daytime noise and night time noise is weighted still more heavily. From this average, an annual CNEL is calculated,[34] which in turn is used to prepare an airport's noise impact boundary.[35] For those airports which have been determined to have a "noise problem,"[36] the regulations have detailed provisions requiring the establishment and validation of the noise impact boundaries and requiring monitoring to measure noise levels at these boundaries.[37]

Establishment of a CNEL of 65 decibels as the level of noise acceptable to a reasonable person residing in the vicinity of an airport is based on relationships between noise in the airport environment and speech, sleep and community reaction.[38] The Noise Standards, however, utilize this level immediately only for new airports and for vacated military airports being converted to civilian use.[39] For existing civilian airports the original design of the Noise Standards was to utilize the less protective CNEL of 70 decibels until December 31, 1985, and 65 decibels thereafter.[40] In what appears to have been a last-minute revision,[41] however, the large civilian airports of the state were provided with far less demanding levels. For these airports, defined as airports with four engine turbojet or turbofan air carrier aircraft operations and at least 25,000 annual air carrier operations (takeoffs plus landings), the criterion CNEL is as follows:[42]

Date	CNEL in decibels
to 12-31-75	80
1-1-76 to 12-31-80	75
1-1-81 to 12-31-85	70
1-1-86 and thereafter	65

Use of these varying CNELs to prepare an airport's noise impact boundary is only a beginning step in the regulatory process of the Noise Standards. The regulations provide a list of land uses, such as agricultural use, deemed to be compatible with a high level of airport noise and thus permitted within an airport's noise impact boundary.[43] All other uses are deemed incompatible and are designated as the airport's "noise impact area," to be measured in square statute miles.[44] Existence of a noise impact area for an airport is crucial, for in a key provision the Noise Standards declare that "_[n]o airport proprietor shall operate his airport with a noise impact area of other than zero unless said operator has a variance_..." (Emphasis added.)[45]

Thus whatever the CNEL level used to define a noise impact boundary, where that boundary encloses incompatible land uses the Noise Standards place upon the airport proprietor the burden of obtaining from the state a variance. Without this variance, continued operation of the airport is prohibited. And it is in the variance process that the true regulatory pay-off of the Noise Standards is found, for the process requires airport proprietors to do the site specific, time-phased planning which will contribute to improvement in the airport's noise situation. Every variance application must state when compliance with the Noise Standards is expected - that is, in variance applications triggered by the existence of incompatibility between an airport's noise and land uses in the surrounding area, when the noise impact area will be zero - and further it must set forth an incremental schedule of noise impact area reductions for the intervening time.[46]

Reduced to essentials, the main thrust of the California Noise Standards is found in three crucial steps:

1) Determination by the county of a noise problem at the airport;

2) Installation by the airport proprietor of a noise monitoring system to establish and maintain the noise impact boundary; and

3) Development of a site specific abatement plan approved by the state as part of the variance process.

The Noise Standards do not treat these three steps as successive. Clearly the determination of a noise problem comes first, but just as clearly monitoring to establish the noise impact boundary and development of an abatement plan are meant to proceed together. Section 5070(b) of the regulations is clear on this important point:

> Each proprietor of an airport that has a noise problem, upon receipt of notification from the county, shall initiate noise monitoring within the shortest feasible time not to exceed 6 months in accordance with this subchapter of these regulations and concurrently shall make application to the department [Division of Aeronautics] for a temporary variance in accordance with Article 13. (Emphasis added.)[47]

Concurrence in the initiation of monitoring and the application for a variance makes excellent sense, since each is a complex process with quite separate and distinct objectives. Monitoring is necessarily intended primarily to provide a data base which allows one to define an airport's noise impact boundary and to gauge the progress being made in the on-going noise abatement program. Initiation of an effective noise abatement program can take place before this data is collected, although undoubtedly it will be refined as the data from monitoring become available. Significantly, Section 5070(b) quoted in full above makes the determination that a noise problem exists the trigger for the variance requirement. "Each proprietor of an airport that has a noise problem . . . shall make application . . . for a temporary variance." The section is not limited to those airports with an established and validated noise impact boundary, nor to those airports whose noise impact boundary encloses a noise impact area of incompatible uses.[48] The existence of a noise impact area greater than zero is relevant in determining the consequence of operating without a variance, however, for only in this circumstance is continued operation prohibited. By implication it appears less stringent sanctions are to be imposed where no variance has been obtained by airports which have a noise problem, but which currently have a noise impact area of zero.

2. "Single Event Noise Exposure Level" (SENEL) Limits

The California Noise Standards as promulgated in 1970 and as they became effective in 1971 and 1972 contained a "single event" regulatory system separate and distinct from the CNEL system described above. Airports which had been determined to have a noise problem were required to establish single event noise exposure level (SENEL) limits,[49] such as the limit for a single aircraft in a landing or takeoff operation, and to monitor compliance with these limits.[50] The Noise Standards stipulated maximum SENEL limits for particular aircraft classes,[51] and they further provided that an airport could not select a SENEL limit in excess of the maximum specified for the noisiest aircraft class then using the airport on a recurrent basis.[52] The intent was to allow existing patterns of service by noisy aircraft, but to prevent any introduction of still noisier aircraft at any airport. Aircraft operators in violation of a SENEL limit were subject to a criminal penalty.[53]

Monitoring systems established at California airports pursuant to the requirements of the Noise Standards have provided for the collection of single event data, and in some cases such data has been used as the basis for the informal sanctioning of violators. Criminal penalties have never been sought, however, for from the beginning there has been doubt as to the legality of the SENEL limits. In an action for declaratory and injunctive relief on the ground that the Noise Standards are entirely invalid under the supremacy clause and the commerce clause, as implemented by controlling federal legislation and regulations, a three-judge federal district court held on February 10, 1975, that

> the SENEL provisions and regulations of noise levels which occur when an aircraft is in direct flight, and for the levying of criminal fines for violation, are a per se unlawful exercise of police power into the exclusive federal domain of control over aircraft flights and operation, and air space management and utilization in interstate and foreign commerce.[54]

In view of this federal preemption of certain aspects of airspace management, the court granted partial summary judgment to the plaintiffs in the form of a declaration that "each of the SENEL regulations, and particularly those levying criminal fines, [is] void and unenforceable..."[55] Although the court did not comment as to whether it considers the collection of single event data to be a "SENEL regulation" for the purpose of its declaration, it did comment generally on airport noise monitoring as follows:

> The monitoring provisions in the California airport noise abatement scheme are innocuous to aircraft traffic. The monitoring of noise levels at and near airports is a passive function involving ground noise measuring machines and recording sound volume data which in no wise intrude upon or affect flight operation and air space management in commerce.[56]

It therefore appears that California airports are free to continue to collect single event data, to analyze the contribution single events make to the CNEL, and to call upon aircraft operators to improve their single event performance record so as to aid in the improvement of the CNEL. Sanctions for a poor single event performance record, however, will have to be rooted in the airport's proprietary power rather than the police power of the state.[57]

C. Determination of Airports with a "Noise Problem"

The prerequisite to both airport noise monitoring and the variance process in California is a determination that a particular airport has a "noise problem." This term is left undefined by the Noise Standards. The standards do, however, suggest its dimensions by directing counties to do the following in making the determination:

1) Investigate the possible existence of a noise impact area greater than zero based on a CNEL of 70 decibels, and determine whether or not people actually reside inside the noise impact boundary;

2) Review other information that it may deem relevant, including but not limited to complaint history and legal actions brought about by aircraft noise; and

3) Coordinate with, and give due consideration to the recommendations of, the county airport land use commission . . .[58]

In recognition of the statutory mandate to allow the maximum amount of local control and enforcement,[59] the Noise Standards provide that the determination of a noise problem is to be made by the county wherein an airport is situated.[60] Initially, counties were required to complete these determinations within "the shortest feasible time" after the effective date of the regulations, which in no event was to exceed six months.[61] Further, provision was made for an appeal to the state Division of Aeronautics by any affected or interested person or any government agency disagreeing with the county's findings regarding the existence of a noise problem.[62] In the event of an appeal, the division makes it own investigation and determination of the validity of the county's findings. This leads to production of a written record and a determination by the state, which is subject to a hearing under the Administrative Procedure Act if so demanded.[63] An appeal has occurred thus far in only one case.[64]

Although the regulations are not explicit as to future determinations of a noise problem, the provisions suggest an open-endedness which should allow for additional determinations that an airport has a noise problem. Those matters which were to be investigated initially are subject to change--for example, the CNEL contour of 70 decibels may expand to encompass residences--and with changed conditions the need for a determination of a noise problem, and consequently for noise monitoring and a variance, may arise.

To date eleven California airports have been determined to have a "noise problem," a number considerably greater than was contemplated by those who drafted the Noise Standards. Of the seven airports surveyed as part of this study, all but Sacramento Metropolitan Airport were so designated.[65] In most cases, the determination was made with a minimum of investigation. In fact, to make such a determination regarding these airports was simply to state the obvious. Generally, the determination was made by resolution of the county Board of Supervisors, usually without any special study having been carried out. An exception is San Diego, where the determination that Lindbergh Field has a noise problem was made on the basis of a special report prepared by a consulting firm.[66]

California's use of a flexible and open-ended "noise problem" determination process is significant more for what it omits than for what it provides. Obviously some means must be used to decide where the action will be. California has hundreds of airports, many of them serving air carriers. Only a fraction of these need or could possibly undertake noise monitoring and a concomitant noise abatement program.

The noise standards eschew elaborate requirements or criteria which must be adhered to before the substance of regulation can begin. The fact some airports are characterized as "noise problem" airports and are consequently subject to very different requirements from other airports constitutes a classification, but no extensive classification process is set up. For situations of genuine uncertainty the appeal process is available, but an appeal on one airport does not hold up the regulatory process for other airports as to which there can be no uncertainty.

One may usefully contrast a system in which the initial step is formal classification of all airports. If all such classification must be completed before the second step takes place, there is enormous potential for delay. Even if regulatory personnel believe they must complete classification before moving on, there will be unneeded delay. The substance of regulation--directing changes in behavior intended to improve the airport noise environment--will be put off while the form of regulation goes forward. Although in California delay in compliance has been widespread, none of it is attributable to the noise problem determination process.

D. Initiation of Noise Monitoring

The California Noise Standards contemplated that each airport determined to have a noise problem would initiate noise monitoring by the end of 1971 at the latest.[67] Following a period of legislative oversight, however, the legislature early in 1971 amended the authorizing legislation to provide as follows:

1) Monitoring to be begun by December 1, 1971; but

2) The Division of Aeronautics could, until December 1, 1972, grant an extension of time "where an airport operator shows to the

satisfaction of the department [division] that noise monitoring equipment is not available."[68]

Since in 1971 only Orange County Airport had plans for a noise monitoring system, other airports with designated noise problems quite naturally took the opportunity to apply for a time extension. The Division of Aeronautics was in every case willing to comply. No application for a time extension was denied. Applicants were granted time extensions without any written "showing" that noise monitoring equipment was not available—ordinarily applicants merely stated their request for more time. And in some cases the Division of Aeronautics granted more time than an applicant sought. As justification for what might appear a very lax pattern with regard to the initiation of the mandated noise monitoring program, the division took the position that major airports required more time to plan for and to install complex and expensive noise monitoring systems than the airports anticipated. In evaluating this position, one should keep in mind that the prospect of required noise monitoring had in fact been in view for major airports in the state ever since late 1970, when the Noise Standards were first promulgated.

An additional point with regard to the monitoring "time extensions" deserves particular emphasis. The initial California Noise Standards set out both a schedule of implementation and a procedure for obtaining variances. It also provided for the possibility of a public hearing in connection with the approval of an application for a variance. Thus, other affected governmental agencies or interested citizens would be given an opportunity to present views contrary to those of the applicant.

When the legislature subsequently dealt with the particular problem of deadlines for monitoring, however, it apparently quite deliberately created a new device in order to avoid the public hearing requirement. One can understand a judgment that full-dress and possibly protracted public hearings pursuant to the Administrative Procedure Act for each airport unable to get a monitoring system functioning within a short time would not be in the public interest. Unfortunately, by insertion of the "time extension" provision, the legislature allowed the pendulum to swing from a full public hearing to complete privacy. Time extensions were extended on request, with no notice whatsoever being afforded to interested third parties. Even the counties--entities charged with enforcement of the Noise Standards, including the monitoring provisions--were not informed by the Division of Aeronautics that a time extension had been requested or granted. Despite a forceful request from the County of San Diego that it be permitted to comment on all requests to extend the time for initiation of monitoring at Lindbergh Field, the procedures of the Division of Aeronautics remained unchanged.

1. The Procrastinators

The nature of the delay in initiation of required noise monitoring at California airports can be illustrated by an examination of specific patterns at three of the airports selected for special study: San Francisco International Airport and San Diego's Lindbergh Field where there has been "delay but progress;" and Ontario International Airport, where there has been "delay, but zero progress."

a. San Francisco International Airport

San Francisco International Airport proclaimed adherence to the goals of effective noise monitoring from the beginning. On January 24, 1972, for example, the Deputy Director of Airports for the City and County of San Francisco assured the state Division of Aeronautics that the airport would "do its utmost to comply" with the new regulations.[69] A month later, when the Director of Airports formally applied for a time extension, he estimated that a contracted noise monitoring study would be completed by July 3, 1972, and a completed noise monitoring system would be operating by the end of March 1973.[70] A time extension until March 31, 1973, was granted, although the state characterized the time requested as "optimistically short."[71] By the fall of 1972 the airport management evidently agreed, for on November 21, 1972, a request for a time extension until September 1, 1973, was submitted.[72] This time the state agency, aware perhaps that its authority to grant time extensions was about to expire, made its own "more reasonable estimate" of the time necessary and granted a time extension to February 1, 1974.[73]

Even the second firm deadline, however, could not be met by the airport. Nearly four months after the second deadline had passed, the airport applied for a variance for the completion of its noise monitoring system. After two and a half years of work on the problem, the airport by then had only progressed to the point of "nearing completion" of technical evaluation on bids received on its noise monitoring system.[74] The variance application was for a third extension of time, this one to April 1, 1975.[75] This was granted on June 12, 1974.[76]

Efforts to discover the reasons for this extraordinary delay in the initiation of noise monitoring at San Francisco International Airport point to several factors. For public consumption the airport management has stressed that the time constraints of the California noise regulations are "unrealistic" given the complexity of establishing noise monitoring at a major airport. The Division of Aeronautics, which made a series of findings in support of its grant of the variance, seemed to agree by stating as its principal finding that an additional 270 days was appropriate due to the "technological problems" in the design, construction, testing, and installation of the required system.[77] No note whatsoever was taken of the previous long delays which had occurred, although one finding stated without supporting documentation that the airport proprietor "is taking . . . bona fide measures to the best of his ability to comply with the requirements of the Noise Regulations."[78]

In fact, considerably more seems to have been involved than simply technological problems pertaining to rapid purchase and installation of a noise monitoring system at San Francisco International Airport. One major factor apparently was a decision to go slow while noise monitoring was initiated at Los Angeles International Airport (LAX). Since LAX is California's busiest airport, in terms of air carrier traffic, and since it has undoubtedly occupied center stage in the California airport noise drama, management of the San Francisco International Airport quite understandably watched noise monitoring developments there very carefully. The delay at San Francisco perhaps reflected a hope that LAX would develop a good system which San Francisco could later adopt. While such a policy may have merit, it clearly was not the policy adopted by the state statute directing compliance by a long-passed deadline (December 1, 1971) and allowing delay only upon a showing that noise monitoring equipment is not available. The availability of equipment during that period is demonstrated by the fact Orange County Airport then had a functioning system and two other California airports—San Jose Municipal Airport, and San Diego International Airport—were moving ahead with the initiation of comprehensive airport noise monitoring.

In addition to a desire to go slow while LAX took the lead among large airports with regard to noise monitoring, the San Francisco International airport's management felt itself constrained by broader fiscal and political considerations. In applying for the 1974 variance, the Deputy Director of the airport offered as one reason for earlier delays "restrictions on funding contingent upon final acceptance of San Francisco International Airport's expansion program Environmental Impact Report by the San Francisco Board of Supervisors."[79] This suggests that airport management sought to delay the initiation of noise monitoring and the consequent acquisition and promulgation of noise data until they were assured that their expansion plans would be approved.

Throughout this period of non-compliance with the spirit—and at times the letter—of state law on airport noise monitoring, management personnel at the San Francisco International Airport were less than completely candid with interested members of the public and with other governmental agencies which have responsibilities for abatement of the airport noise problem. The most striking example of this behavior occurred in connection with the grant of the variance which for the third time extended the deadline for compliance with the noise monitoring requirement. The second of the two "time extensions" previously granted by the Division of Aeronautics expired in February 1974, and a third could not be granted because the division's authority to grant a time extension expired at the end of 1972.[80] For a period the airport seems to have contemplated leaving the matter in limbo-i.e., continuing to operate as usual without noise monitoring, without a time extension and without a variance. Airport personnel have indicated that this route--one which could aptly be termed "the Ontario syndrome," as will be developed below--was initially condoned by officials of the state Division of Aeronautics. Subsequently, however, representatives of citizens' groups in San Francisco inquired as to the status of the airport's noise monitoring program. The Division of Aeronautics thereupon indicated to the airport that application should be made for a variance.

During the same time period, inquiry was also made by the Regional Planning Committee of San Mateo County. This committee is the designated Airport Land Use Committee for the county in which the San Francisco International Airport is located, and as such it has significant responsibilities for land use control around the airport. Since the land use control scheme is intimately linked to the noise impact boundaries which noise monitoring systems validate, the Regional Planning Committee had more than a passing interest in progress on monitoring.

In response to the committee's inquiry, the Deputy Director of Airports for San Francisco sent a three page letter reviewing in considerable detail the "past progress" and "present status" of noise monitoring at the airport, including a review of the two time extensions which had been granted.[81] What this letter did not disclose--and what appears an appalling lack of candor in the circumstances--is that on the very day that letter was written the Deputy Director was applying to the Division of Aeronautics for a variance to allow a third delay on noise monitoring.[82] This omission is particularly serious because the letter to the Regional Planning Commission quite obviously was presented as a comprehensive review of the subject matter.

Lack of candor by airport management on this point would be a minor matter, but for its important functional consequence. Under the California Noise Standards variance applications, unlike applications for a "time extension", are subject to public hearing on the motion of any "affected or interested" person.[83] This would seem to include both the citizens in San Francisco who have engaged in agitation over airport noise and the San Mateo Regional Planning Committee.

But an affected or interested person cannot move for a public hearing on a variance application without knowledge that such an application has been made. By failing to disclose the application to the Regional Planning Committee, airport management succeeded in avoiding the possibility of a public hearing at which they would have had to justify their long delay on noise monitoring and the public interest in the extension of still more time. No citizen or other local public agency would have the knowledge necessary to move for a public hearing, and the airport's intimate relationship with the Division of Aeronautics was enough to ensure that the division would not make such a motion. In view of the facts that 1) this was the first variance ever granted under the Noise Standards, 2) the San Francisco International Airport had been given two time extensions previously, and 3) by operating for four months in violation of divisional regulations the airport had subjected its state operating permit to possible revocation, one might have expected that on principle the division would have moved for a public hearing. Such expectation, however, runs directly counter to the passive attitude that the Division of Aeronautics has consistently taken toward compliance with its airport noise regulations.

b. San Diego's Lindbergh Field

In late 1971 when the noise monitoring provisions of the Noise Standards became effective, the County of San Diego and the San Diego Unified Port District (the proprietor of Lindbergh Field) were in an excellent position to move rapidly toward implementation. The Port District already had under contract a consultant charged with preparation of an aircraft noise monitoring plan for Lindbergh Field, and early in 1972 the County of San Diego retained a different consultant to prepare a noise impact assessment for all airports within the county. The county's consultant had in preparation for the Comprehensive Planning Organization of San Diego County technical reports for a San Diego Plan for Air Transportation (SANPAT), so that it already had in hand much of the needed data. In fact, the noise impact assessment was completed in little more than a month after approval of the contract.[84] It therefore appeared in the spring of 1972 that in the near future Lindbergh Field would have a noise monitoring system, and the County of San Diego would be receiving data from that system and would be making its quarterly reports to the state. Two and a half years were to elapse, however, before these requirements of the Noise Standards would be satisfied.

Five factors seem to have been at work in bringing the long delay on noise monitoring at Lindbergh Field. First, as at most of the other noise problem airports in the state, those with management responsibilities at the Port District displayed less than total enthusiasm for their new responsibilities. Airport noise monitoring represented an expenditure of time and funds, there was the usual fear that any noise data collected would ultimately be used against the Port District in private litigation seeking damages, and during the early 1970s the Port District and the

Board of Supervisors were engaged in a running battle as the Board of Supervisors vainly sought by formal and informal action to limit night flights into Lindbergh Field.

Second, despite its stated intentions, San Diego County was unable to press the Port District to proceed as rapidly as possible with initiation of noise monitoring. The Noise Standards place the primary enforcement responsibility for the monitoring requirement squarely upon the counties, but San Diego County was unable to discharge this responsibility in an effective manner. Protests were made to both the Port District and to the Division of Aeronautics about different matters, but the county seems never to have contemplated direct court action using its own enforcement powers. In fact, despite the clear mandates of the Noise Standards, some confusion seems to have existed in the minds of key county officials as to the nature of the county role in Noise Standards enforcement, particularly regarding the county's power to compel an airport proprietor to seek a variance. At one point the county supervisor most concerned about airport noise expressed disillusionment with the Noise Standards, principally because the CNEL criteria to be used for Lindbergh Field for the 1970s define a noise impact area much smaller than the area of active noise complaints. This disillusionment may in part explain why there was no effective follow-up on the county's expressed interest in strict compliance with the Noise Standards.

Third, a dispute over interpretation of the Noise Standards between the consultant for the Port District and the consultant for the County of San Diego caused delay. In October 1972 the Port District's consultant submitted its report on the development of a monitoring system for Lindbergh Field.[85] It contained a description of existing noise levels and operations, a general monitoring system plan, a statistical sampling plan for continuous monitoring at locations on or within the 80 decibel CNEL contour, and proposed single event noise limits. The monitoring system was to consist of eight stations, six on the 80 decibel CNEL contour and two to measure single event noise levels at either end of the airport's single runway.[86] The system was to be capable of expansion to fifteen monitoring stations.

The report was accepted by the Board of Port Commissioners of the Port District and became the basis for the monitoring plan submitted by the Port District to the County of San Diego and the state Division of Aeronautics. This plan was referred by the county to its consultant for comment, and the consultant commented that under the Noise Standards it was improper for the Port District to monitor at the 80 decibel contour rather than the 70 decibel contour. Ultimately this comment was transformed into a request from the county to the Port District to monitor at the 75 CNEL contour, a line supported by no statutory authority whatsoever. The Port District refused to comply with this request, and the county dropped the matter.

Fourth, the state Division of Aeronautics did nothing to assist in rapid initiation of noise monitoring. In fact, interviews with personnel in the county Public Works Agency indicate that at the very time the Board of Supervisors was publicly advocating quick action on airport noise monitoring at Lindbergh Field, individuals with the Division of Aeronautics were counseling a "go slow" attitude.

Fifth, once the monitoring system was installed, a technical malfunction with one microphone was allowed to continue uncorrected for many months. As a result, certification of the system by the Division of Aeronautics was considerably delayed. The Port District collected noise data during this period, but it has refused to release these data to the county or to the public.

c. Ontario International Airport

Despite the many delays and the disappointing attitude of airport management toward some of the requirements of state law, progress on noise monitoring has been made at the San Francisco International Airport and at San Diego's Lindbergh Field. The Lindbergh Field system was certified by the state Division of Aeronautics on September 16, 1974, and that for San Francisco International Airport is under construction. This "progress with delay" contrasts rather markedly with the situation at Ontario International Airport, where there has been literally no significant progress toward noise monitoring over the same three and a half year period.

Many commentators on airport noise problems have emphasized that "political fragmentation" is a key variable inhibiting progress. The phrase encompasses two distinct concepts: first, that the governmental entity or entities with responsibility for management of the airport impact zone surrounding an airport are different from the governmental (or, occasionally, private) entity with responsibility for management of the airport itself; and second, that the impact zone entities have little leverage over or influence upon airport management entities. Often the fragmentation consists of airport management by the municipality wherein the airport is located and major impact zone responsibility lodged in other cities and/or the county government. In these instances considerable divergence in the goals of the different governmental entities may exist, but nonetheless as units within a single county they must cooperate for many purposes.

A more extreme form of political fragmentation is found when the airport management entity has no tie at all with the host county, with the exception of whatever links are created by the fact of proprietorship itself and whatever tenuous links may be established by regional associations of governments. In this connection it is worthy of note that of the seven airports selected for special attention in this study, the noise monitoring situation has been worst at the two characterized by this more extreme form of political fragmentation. In the case of San Francisco International Airport, the airport is located in San Mateo County, but owned and operated by the City and County of San Francisco. In the case of Ontario International Airport, the airport is located in San Bernardino County, but operated by the City of Los Angeles.

For Ontario, it was not always so. Until 1967 the airport was owned and operated by the City of Ontario. Thus, the proprietor was the political body directly responsible to many of those living in the noise impact zone. The rest of the impact zone residents were citizens of neighboring cities--Chino and Montclair--with which the City of Ontario had regular dealings. In 1967, however, the city contracted with the City of Los Angeles for a "joint exercise of powers" in relation to Ontario International Airport. In order to obtain the financial support of the City of Los Angeles for expansion and development of the Ontario International Airport, the City of Ontario turned over the administration of the airport to the Los Angeles Department of Airports.[87] Although the contract imposes obligations on the City of Ontario to assist with the expansion of the airport, for example by exercise of its power of eminent domain,[88] the City of Ontario retains virtually no control over airport operations.[89] Only advice may be offered, through an Advisory Board made up of two members of the Ontario City Council. Some impression of the priority which Ontario has attached to the protection of its residents from harmful airport noise is gained by noting that, in the list of six airport-related problems which are said to be mutual to the cities of Ontario and Los Angeles and with which the Advisory Board is to deal, airport noise does not appear.[90]

The 1967 contract has meant that in any attempt to enforce the noise monitoring provisions of the Noise Standards San Bernardino County would be confronting the Los Angeles Department of Airports rather than the City of Ontario. The problem is exacerbated by the fact that this department, like several other independent, "non-political" departments of the City of Los Angeles, has a semi-antonomous status within city government which makes it subject to only tenuous control by the City of Los Angeles itself.

With regard to noise monitoring, Ontario International Airport has been a casualty of the failure of the Hewlett-Packard Company's system installed at LAX. The Los Angeles Department of Airports long-range plan was to use telephone wires to transmit monitoring data from Ontario International Airport to be processed by the data processing facilities at LAX. When the Hewlett-Packard system failed at LAX and had to be removed, this plan had to be abandoned.

For a long period after the Hewlett-Packard system failed at LAX, no substitute noise monitoring plan was considered. Indeed, despite the absence of any preliminary injunctive relief in favor of the plaintiffs, the Los Angeles Department of Airports took the position that the lawsuit challenging the validity of the Noise Standards meant that there was "no law" on the matter.[91] In other words, the Los Angeles

Department of Airports treated the state's regulations as void in their entirety, even though it had no judicial warrant for doing so. In the face of the decision of the court to grant summary judgment only with regard to the SENEL regulations, however, the department has reversed its position. Recommendations have now been made by the Los Angeles City Attorney for compliance with the Noise Standards at LAX, and presumably the Los Angeles Department of Airports has under consideration compliance at Ontario International Airport as well. Preparations are now being made to go to bidding on a second noise monitoring system for the two airports.

From a legal point of view there is no doubt that the Ontario International Airport is operating in clear violation of both the letter and the spirit of state law. The airport's only "time extension" expired on June 1, 1973. No further time extension can be granted, no variance has been applied for and no noise monitoring system has been obtained for the airport.

Confronted with this situation, the responsible state and local agencies have simply folded their hands. When the Community Relations Commission of the City of Ontario complained to the state Division of Aeronautics over the delay in initiation of noise monitoring at the airport,[92] the division agreed that further delay would be unreasonable.[93] It also stated--in what seems to be the high water mark for enforcement by the state agency during this entire half decade of work on the problem--the following: "This Division is currently initiating action to bring Ontario International Airport into conformance with the requirements of Title 4, Subchapter 6, of the California Administrative Code, which requires certain noise monitoring to be done at the Ontario International Airport."[94]

"Action" by the Division of Aeronautics could have been of great significance. Ontario International Airport can legally operate only on the basis of the airport permit it holds from the division.[95] State law specifically makes this permit subject to revocation if divisional rules or regulations are not complied with.[96] And the noise monitoring requirements are clearly an applicable divisional regulation. It might be objected that permit revocation is not a viable sanction, since politically and economically powerful forces would never allow closure of the airport. Thus, any attempt to close the airport might be countered immediately by special legislation to exempt it from the noise monitoring requirements. However, revocation of the airport's present permit could be accompanied by issuance of a new permit made conditional upon the initiation of an acceptable noise monitoring program. The conditions of the permit could then be enforced by court action by the division.

A second form of "action" which the Division of Aeronautics might have taken pursuant to its statement of September 14, 1973, would have been court action to compel those who operate the Ontario International Airport to comply with the Noise Standards and to compel San Bernardino County to perform its obligation to enforce compliance with the Noise Standards. This is a more direct course of action, and insofar as it involves action directed at the county it seems to be quite straightforward.

Insofar as an action by the Division of Aeronautics (Department of Transportation) to enforce the Noise Standards would be taken directly against the airport proprietor and manager, however, it carries with it one complication. The state statute which mandates the Noise Standards states that it "shall be the function of the county wherein an airport is situated to enforce the noise regulations established by the department [division]."[97] This clearly gives to San Bernardino County the initial responsibility to act to compel noise monitoring at the Ontario International Airport. The complication arises in the potential for an argument that suit by a state agency is barred as the statute gives exclusive enforcement power to the county.

This interpretation has some plausibility, particularly in view of the statutory guideline that "the maximum amount of local control and enforcement shall be permitted."[98] On balance, however, it seems incorrect. It would leave the Division of Aeronautics in the anomalous position of having no power directly to enforce its own administrative regulations. It would read "maximum...local control and enforcement" not as a provision designed to avoid state preemption of the subject matter, but rather as a provision allowing total local governmental inaction with regard to the subject matter. And it would run counter to language in the Noise Standards, which were explicitly approved by the legislature, that gives to the Division of Aeronautics at least secondary or "back-up" enforcement responsibility.

These enforcement responsibilities of the Division of Aeronautics contemplated by the Noise Standards are particularly compelling with regard to noise monitoring. A noise monitoring plan is initially developed by an airport proprietor, and then it is submitted "to the county and to the department [division] for approval."[99] The division, in fact, has taken the position that this language means that only the division must approve the monitoring plan and that the county merely receives "an informational copy...for their comments and coordination with this Division."[100] Thus, with regard to administrative enforcement of the requirement that a monitoring plan be approved, the division has assumed the Noise Standards give it the primary responsibility.

Further, those provisions of the Noise Standards which deal explicitly with implementation by the Division of Aeronautics state that the division is to "review the data submitted quarterly by the counties for the purpose of assessing the degree of compliance" with the Noise Standards.[101] "Compliance" in this provision refers to compliance by the airports as well as by the counties, for the next sentence states that the division's review "will include... observation of any changes in boundary monitor positions and any changes in numerical values of CNEL."[102] To assess such matters for compliance would seem a rather useless act if the division has no power to sanction non-compliance when discovered. And if non-compliance with the Noise Standards in the operation of a monitoring system is subject to divisional enforcement, then divisional enforcement of the fundamental requirement that "noise problem" airports establish monitoring systems is an _a fortiori_ proposition.

None of the enforcement possibilities which have been mentioned were, however, what the Division of Aeronautics had in mind in informing Ontario's Community Relations Commission that "action" would be taken. What the division did was to write some letters and then drop the matter. A letter went out to the Director of Airports for San Bernardino County, by which background information on the noise standards was supplied and the division noted that "no formal monitoring plan for the [Ontario] monitoring system has been filed with this office."[103] In addition, the division offered to participate in a conference regarding county responsibilities relative to the noise standards.[104] And a letter went out to the Assistant General Manager of the Los Angeles Department of Airports, in which non-compliance at Ontario International Airport was noted and the procedures for obtaining a variance were outlined.[105] The letter included the observations, however, that the division "has no authority to do any enforcement relative to the monitoring requirements of the noise standards" and that San Bernardino County could enforce them "to the degree it desires."[106]

San Bernardino County evidently had no desire to enforce the noise standards pertaining to monitoring. As will be developed in the discussion below of land use control in the area surrounding the Ontario International Airport,[107] the County Board of Supervisors has favored expansion by the airport and has consistently opposed any action which would run counter to what airport management sees as the airport's interest. When applied to the monitoring question, this means those who control the county government have no intention to compel compliance with the state regulations. With refreshing candor, the county Director of Airports indicated to an interviewer that no proposal to the County Board of Supervisors for action against the airport would be made, for if such action were proposed "I'd get fired."[108]

2. Limited Monitoring: Metropolitan Oakland International Airport

A review of the basis for determination of a noise problem at the Metropolitan Oakland International Airport will assist in understanding the nature of the limited monitoring effort at that airport. The determination was made by resolution of the Board of Supervisors of Alameda County,[109] which acted on the basis of a report to it from the county Airport Land Use Commission (ALUC).[110] In its report, the ALUC considered the noise situation at both the airport's North Field and its South Field. The North Field, established in 1927, is used almost exclusively for general aviation--in part because the take off tracks pass directly over a residential area inhabited by about 4,000 persons. The South Field, built in the mid-1950s on bay fill, consists of a single runway used mainly for jet air carrier traffic.

Pursuant to the criteria of the Noise Standards, the Alameda County ALUC studied the complaint history for the airport, legal action which had been taken on noise and the possible existence of a noise impact area greater than zero using a CNEL contour of 70 decibels. Although it found there was not a noise impact area greater than zero, the ALUC found there was a considerable history of complaints and litigation for both the North Field and the South Field, with over 70% of all noise complaints prompted by the North Field. On this basis it determined that the airport has a noise problem.[111]

Despite the fact that a noise problem was determined to exist for the *entire* airport, including both the North and South Fields, the Noise Standards have been interpreted to require monitoring only at the South Field. This results from the fact that SENEL monitoring is not required for flight tracks "associated with aircraft operations which do not contribute to the noise impact area of the airport."[112] Since the noise impact area at Oakland is created by South Field flight tracks, but not North Field flight tracks, no North Field monitoring is thought to be required. This demonstrates a curious gap in the Noise Standards: complaints and litigation alone--*without* the existence of a noise impact area—clearly are enough to justify determination of a noise problem; such a determination is supposed to lead to monitoring; yet measurements are not required where there is no contribution to a noise impact area. This may seem logical enough if one considers the aim of monitoring to be measurement of progress in eliminating the noise impact area calculated by Noise Standards criteria--if there is no noise impact area, there is nothing which needs to be eliminated. But monitoring is also a way of checking on single event violations, which can occur whether or not there is a noise impact area. Without North Field monitoring at

Oakland, there is no firm basis for reviewing some of the noise abatement procedures which have been established for that field.

Even at the South Field, monitoring is far less intensive than at those other airports in the state which have begun to monitor under the Noise Standards. They all have "continuous" noise monitoring, which in principle means monitoring at least forty-eight weeks of the year.[113] Since Oakland has less than one thousand homes within the CNEL contour of 70 decibels, however, it is required only to have "intermittent" CNEL monitoring.[114] This calls for one week of monitoring per calendar quarter at each monitoring location. Since the airport has four engine jet service and over 25,000 operations annually, only the CNEL of 80 decibels need be monitored, and this is done at only two monitoring sites. Further, there is no SENEL monitoring at all for the South Field, on the theory that measurements need not be made on the flight track centerlines since these points are over water.

If one accepts the premise that noise monitoring is not an end in itself, but is only a means to the end of noise abatement, then one conclusion for Oakland might be that airport management is to be commended for limiting its monitoring effort so severely. Data from the intermittent CNEL monitoring at the South Field show not only that there is no noise impact area there, based on a CNEL of 80 decibels, but also that at the sites being monitored the annual CNEL runs well below 80 decibels. If there is no present noise problem and no need for an abatement program at the South Field, then money spent for more elaborate monitoring would simply be wasted.

This conclusion, however, cannot be so easily reached for the North Field. There a problem clearly exists, and on February 1, 1974, the airport promulgated a formal noise abatement policy for the North Field.[115] One element of this policy is a curfew (10 p.m. to 7 a.m.) for many types of aircraft. The other element requires during non-curfew hours that all aircraft meet FAR 36 noise limitations, either by certification or by operational restrictions -- otherwise, they are to use the South Field. Each of these elements of the abatement policy could be enforced through use of single event noise monitoring at the North Field—yet the noise standards do not require such monitoring, and airport management shows no propensity to go beyond the bare requirements of the law for the North Field.

3. The Effective Use of Monitoring for Abatement and Educational Purposes

An obvious premise of the California noise standards is the proposition that the collection of data by means of airport noise monitoring programs is not an end in itself. Rather, the intent clearly is to have data used in a way which produces effective noise abatement. Without such abatement, the most sophisticated and reliable of monitoring systems is only a useless—and expensive--plaything.

The possibilities for effective use of monitoring data vary with the two types of data produced by the monitoring systems, that is CNEL and "single event" data. Of the airports now engaged in monitoring in California, only Orange County Airport engages in any significant abatement effort on the basis of its single event data. That airport also uses CNEL data effectively in its noise abatement progarm.

a. Orange County Airport

1./ Single Events: The Admonishment Campaign

The principal way in which Orange County Airport uses single event data is in an organized and apparently effective admonishment campaign. This campaign was initiated on June 9, 1971, by the airport's noise abatement specialist. Three aspects of the campaign are particularly worthy of note: 1) noise limits below the official SENEL limits are used as a basis for admonishment; 2) the heart of the program is direct and forceful communication to those deemed in need of admonishment; and 3) the program has lacked a suitable range of coercive sanctions, and some of those which are available have been rendered ineffective by ATA v. Crotti, the litigation challenging the validity of the Noise Standards.[116]

The court's order in that litigation, which grants the plaintiffs partial summary judgment with regard to SENEL regulations, should not adversely affect the existing Orange County Airport admonishment program. That program has been built without any practical benefit from the criminal penalties to which the court particularly objected. Nor has it been essential to have the single event maximums which appear in the Noise Standards. The airport can continue to collect single event data to evaluate the contribution of particular operations of achievement of its noise abatement goals,[117] and violations of the airport's own single event goals can be enforced if enforcement is tied to the airport's proprietary power. An example of such a sanction would be an increased landing fee for a noisy operation.

The Noise Standards as promulgated and approved by the legislature provided SENEL limits to be proposed by the airport proprietor but approved by the Division of Aeronautics, subject to the maximums laid out in the regulations. These maximums are very high, as they aim only to prevent the introduction of noisier classes of aircraft at airports with an existing noise problem. Even for existing classes of aircraft the figures used are high, as they are based on maximum gross weight operation without noise abatement flight procedures.[118] In most cases proprietors have proposed limits at or near the maximum allowed by state law, despite the statement in the Noise Standards that proprietors are encouraged to recommend lower limits.[119] For Orange County Airport the SENEL limit for monitor number one is 112.5 decibels, which is the maximum permitted under the noise standards.

For the admonishment program, however, 107 decibels is used for monitor one. Comparably lower single event noise exposure levels are used for each of the other four monitors.

On the basis of the lower noise levels which have been established, the airport's noise abatement specialist determines individual violations from noise data obtained by the monitors. For private (non-scheduled) aircraft operators, violations are communicated by a letter of admonition. The data is not included in the letter itself. Rather, the particular operation is characterized as "very noisy" and future cooperation is requested. Letters promising such cooperation are frequently sent in response.

An analysis of all Orange County Airport Noise Abatement Office correspondence for the period from June 1971 through July 1974 shows that totally successful cooperation is not always in fact forthcoming, as the files contain a number of letters to repeat offenders. It appears over the three years of this program that there has been a slight decrease in the annual number of admonitory letters sent and a significant decrease in the number of repeaters. In addition to over two hundred letters of admonition which dealt with excessively noisy operations during non-curfew hours at Orange County Airport, twenty-three letters were sent to aircraft operators who violated either a SENEL limit or the airport's curfew.

The two air carriers who service the Orange County Airport receive information from the airport's noise abatement office in a different form. Letters of admonition are not sent for each violation. Instead, each air carrier is sent a weekly summary of violations. These show not only the existence of a noise level violation, but also deviation by the aircraft from the recommended departure track over the Newport Bay.

Analysis of the weekly summaries supplied to the two air carriers during the period from January 1, 1974, through July 25, 1974,[120] shows a striking difference in performance. Air California has over twice as many operations annually at Orange County Airport as Hughes Air West, but Hughes Air West had far more violations during the period studied. The two carriers use different aircraft, for Air California flies Boeing 737s and Hughes Air West flies DC 9s. This hardly explains the disparity, however, as the DC 9 is in principle a quieter plane than the Boeing 737.

Efforts to determine the reason for this striking difference in performance suggest that a key difference was in pilot attitude. Pilots for Air California are members of the Teamster's Union. This union, of course, built its membership and reputation largely with truck drivers. It contains few pilots, and it has not shown great interest in the airport noise problem. Pilots with Hughes Air West, on the other hand, are members of ALPA—the Air Line Pilots Association, a powerful organization which represents most air carrier pilots in the county. ALPA has consistently taken a great interest in noise abatement procedures, and in the name of safety it has often resisted implementation of such procedures.

In addition to pilot attitude, other factors seem to have brought about the difference in performance between Air California and Hughes

Air West. Air California, for example, is headquartered in Orange County, and therefore it has a particular stake in a favorable public image there. Whatever the reasons for the differing patterns of performance, it is significant that through persistent pressure based on the factual data derived from the continuous noise monitoring system, the airport was able to obtain a change in behavior from Hughes Air West. An important element in that pressure was the decision to place the airline on a month-to-month lease basis with regard to use of the airport's facilities until the problem was solved. The airport now reports a considerable change in performance by Hughes Air West aircraft, and the elimination of any marked disparity between data on Hughes Air West single events and those on Air California single events.[121]

Although the noise abatement specialist at Orange County Airport has led an aggressive admonishment campaign, which appears to have had a beneficial impact, it is crucial to note that the coercive sanctions available have been very limited. The state statute makes violation of the noise standards a misdemeanor, with punishment to be a fine of one thousand dollars for each infraction.[122] This provision has remained a dead letter, however, during the litigation of ATA v. Crotti, and it has now been judicially declared to be invalid.[123] During the litigation lawyers representing the state deemed it advantageous to avoid any enforcement of SENEL limits. Their judgment was that such enforcement might allow the plaintiffs in the suit to obtain preliminary injunctive relief and/or provide these plaintiffs with tactical advantage in the suit itself. Contact by these lawyers with county law enforcement personnel in the few counties where airports are monitoring led to agreement that no prosecution would be initiated until ATA v. Crotti was resolved. Consequently, although monitoring data at Orange County

Airport shows that numerous SENEL violations occurred, there were no prosecutions.

Prosecutions, in any event, would not have been possible for the majority of violators who were within the official SENEL limits, but above the limits set for the admonishment program. Nor is prosecution in principle a particularly attractive weapon. District attorneys are frequently less than anxious to devote substantial resources to environmental law enforcement. Many of the violations involve itinerant business jets, so the case must be brought against an operator with home base in another jurisdiction. And given the criminal nature of the penalty, in any contested proceeding proof beyond a reasonable doubt would have to be provided on the basis of the state's first airport monitoring system.

In the absence of prosecution, Orange County Airport personnel have resorted to threats of various other sanctions. The standard form for weekly reports to air carriers states that continued excesses "will result" in denial of the use of airport facilities. This could mean exclusion from the airport. Or it could mean certain less severe measures which airport personnel have had under study, e.g., refusal to grant tiedown or hangar space, or refusal to sell jet fuel.

So far none of these threats has been carried out, nor does it appear likely any will be in the near future. Such measures cut against the economic and service interests of the airport itself, and they thus damage the airport proprietor as well as the air carrier or other aircraft operator. A more effective form of sanction is one that works to the economic advantage of the airport, while providing an incentive for pilots to do the best possible job to achieve compliance with all noise abatement procedures. An example which has been studied by the County Counsel of Orange County is a fee incentive system which would relate aircraft user fees to noise levels. Departure fees would be added to arrival fees, and each would be scaled upward where the operation is noisy.[124]

2./ CNEL

In addition to the "single event" data which have been discussed, the Orange County Airport's noise monitoring system produces data used to determine the CNEL at various monitoring points. Here too, airport personnel have developed ways to ensure that the data have a beneficial impact and are not allowed to remain as if an end in themselves. Reports are regularly submitted to land use decision-makers on the aircraft-generated noise environment of proposed new developments. These reports relate the site in question to airport flight tracks, calculated CNELs and the noise complaint history of the area. The data thus serve as an effective input to the land use planning process.

During the period that Orange County Airport has been engaged in noise monitoring and the use of monitoring data to seek abatement, some progress has been made in reducing the airport's noise impact area. Since the airport is not served by four-engine aircraft, its noise impact boundary is defined by a CNEL contour of 70 decibels.[125] This boundary in March 1972 enclosed 277 acres and 335 homes.[126] Two years later the boundary had shrunk to enclose 143 acres and only 113 homes.[127] This significant reduction seems excellent support for the high praise the airport's program deserves.

The explanation for good progress at Orange County Airport, while comparable airports in the state have made no substantial progress at all, has many aspects. Commercial jet service only began at the airport in 1968, so the shock of a greatly increased noise impact almost coincided with the beginning of the recent wave of environmentalism. In addition, the airport's neighbors are in large part unusually affluent citizens who are in a good position to turn their concern into effective political and legal action. The contrast between the viable noise abatement program developed for Orange County Airport and the failure even to begin on noise monitoring at Ontario International Airport is striking, and it owes its existence in substantial measure to the different nature of the surrounding communities. Many homes impacted by the Orange County Airport are in the $100,000 and up category, and they are occupied in large part by professional and business people with incomes among the highest in the nation. For Ontario, the situation is radically different. Homes in the impact zone seldom exceed $25,000 in value, and most occupants have an income placing them in middle or low income groups.[128]

There seems to be more to the Orange County success story, however, than simply a new problem to which an affluent citizenry has responded with outrage and with litigation. An important aspect of the story is the fact that the airport personnel who carry out the technical monitoring work are also intimately involved in abatement. Within the airport structure the noise abatement specialist reports directly to the airport manager--not, as is planned at San Francisco International Airport, through operations personnel who may be much more interested in untroubled aircraft arrivals and departures than in noise abatement. And the airport is part of the county government, which under the California Noise Standards has responsibility for analysis and effective use of monitoring data. It is the county which must validate monitoring data, report on a quarterly basis to the Division of Aeronautics, and take on the primary responsibility for enforcement of the Noise Standards.

Significantly, this integration of functions produced in Orange County by the fortuity of county ownership of the airport does not exist at any of the other California airports with operational noise monitoring systems. In San Jose, the airport is operated by the City of San Jose; in Oakland, by the Port of Oakland, itself a part of the city government; and in San Diego, by a special port district. These three systems are all relatively new, but it is nonetheless important that none show signs of establishing an effective link between the highly technical work of noise monitoring and the technical/political work of noise abatement.

b. San Jose Municipal Airport

Noise monitoring at San Jose Municipal Airport was begun in 1973, with eight remote monitoring sites operating on a continuous basis. Single event data have been collected for the purpose of determining the existence of any violations of the SENEL limits established under the Noise Standards, but there has been no attempt to develop any sort of admonishment campaign like that at the Orange County Airport. Nor do there appear to have been concerted efforts to ensure that data developed by monitoring are used in a systematic campaign for airport noise abatement as is being done at the Orange County Airport. In many respects those at the San Jose Municipal Airport seem to have pursued noise monitoring as a technical exercise, more an end in itself than the means to the development of site specific noise abatement planning, although efforts have been made to supply the airport land use commission with relevant data from the noise monitoring system. Major emphasis with regard to abatement has been placed upon implementation of the "two segment" approach and upon a major land acquisition program in the approach area to the south of the runways. Although this acquisition program is being justified primarily in terms of the safety and efficiency of aircraft operations, quite plainly it will be beneficial with regard to the airport's noise problems and is so perceived by airport management.[129]

One innovation at San Jose Municipal Airport which is worthy of mention, however, is the visual display system developed for monitoring data. Unlike other airports which carry on monitoring as a part of the airport's non-public functions, at San Jose a small room near the center of the airport lobby is being used for all the "read out" equipment. Material is posted to explain to the public the nature of the equipment, although the display lacks material to explain salient facts about the damage caused by airport noise, to summarize the Noise Standards or to link noise monitoring to noise abatement.[130] Nonetheless, the San Jose effort is a beginning step toward more public awareness of the work now going on. While some might dismiss the effort as "more airport PR," the fact is that proper public relations consists of public education, which in turn can lead to increased public understanding of the problem and acceptance of measures (e.g., higher passenger ticket costs) which may ultimately be taken to deal with the problem.

E. Aviation Measures to Abate Noise

Once a particular airport has been determined to have a noise problem, the California Noise Standards provide for two fundamental and concurrent courses of action: noise monitoring must be initiated and a variance must be obtained. In addition, the standards offer to proprietors a list of methods for controlling and reducing noise problems.[131] Presumably these methods are to be utilized by proprietors who, in making application for a variance, must establish how compliance with the standards will be achieved.[132]

Aside from the variance to allow additional time for San Francisco International Airport to complete its noise monitoring system, there is only one instance in California of the grant of a variance. This is the variance for Orange County Airport, which will be dealt with below.[133] Independently of the variance process, however, California airports have taken some steps to abate their noise problems. These steps cannot be credited to the Noise Standards. Rather each appears to have resulted from local pressures. Nonetheless, to give a more nearly complete picture of the noise abatement work which has been undertaken by the seven airports selected for special study, major steps taken at three airports will be briefly reviewed.

1. San Francisco International Airport

Noise abatement procedures at the San Francisco International Airport originated in the late 1950s when commercial jet service was first introduced there.[134] At that time approximately 90% of all departures were from runway twenty-eight through the "San Bruno Gap," a break between Mount San Bruno on the north and coastal hills on the south. Such departures have a serious noise impact on residential sections of both the City of San Bruno and the City of South San Francisco. In order to minimize this impact, two procedures have been worked out over the past seventeen years. First, preference for departures has been given to runway one, which allows a departure flight path directly over San Francisco Bay. Approximately 67% of the airport's departures now are by runway one. Second, when wind conditions require that runway twenty-eight be used (generally in the summer months), pilots have been encouraged to utilize a "shoreline departure." This departure, which was made possible by a runway extension, involves a right turn immediately after take off. Aircraft fly over a commercial and industrial section of the City of South San Francisco, then out over San Francisco Bay, thus avoiding the San Bruno Gap altogether. Recently fuel shortages and fuel price increases have made this route attractive to airlines for eastbound and northbound flights, independently of its noise abatement advantages. Currently some 90% of such flights, or nearly half all flights departing from runway twenty-eight, use the shoreline departure route.

Noise abatement procedures have also been developed over the years for arrivals at San Francisco International Airport. Most flights arrive from the south and use runway twenty-eight. In previous years the approach pattern took them over Foster City, a relatively new community developed on bay fill in the early 1960s. Changes in the location of the ILS localizer have been made, however, so that the approach pattern is now over San Francisco Bay.

2. San Jose Municipal Airport

At San Jose Municipal Airport the principal noise abatement aviation procedure now in force is the two segment approach.[135] This procedure was begun by the airport manager in the early 1970s, before the initiation of monitoring and independently of the variance and abatement schedule requirements of the Noise Standards. The procedure is not mandatory, but it has nonetheless had some success. Airport officials estimate that compliance has been about 25%.[136] They note further that approximately 80% of complying aircraft are Air California flights and that airlines whose pilots belong to ALPA virtually never comply.[137]

The two segment procedure in use at San Jose for the past two years involves no new instrumentation on the aircraft. It is used only in clear weather. Air carrier pilots on Instrument Flight Rules cross the airport's 180 degree line at 5,000 feet or higher as they approach from the west. The two segment approach then calls for a sharp left turn toward the runway, with an angle of descent that varies from twelve to six degrees. This continues until the last mile, when the angle of descent is the normal three degrees. During the period of a sharper angle of descent aircraft are over residential and commercial sections of San Jose which are mostly outside the 65 decibel CNEL contour, but which are nonetheless adversely affected by aircraft noise. Because the aircraft are higher than in a normal approach pattern, except for the final mile, and because aircraft need less power for this approach, the noise impact on the ground beneath the higher angle portion of the approach is improved by up to 10 decibels.

3. Orange County Airport

Orange County Airport's admonishment program, which is linked to the single event data obtained by the airport's noise monitoring system, has been described previously.[138] A second major noise abatement effort has been a preferential runway system. This system was in operation for two years and it seems to have led to an over-all improvement in the airport's noise environment, but political pressures have caused it to be discontinued.

The runways at the Orange County Airport are oriented approximately northeast to southwest. Since the prevailing wind is from the southwest, routine procedures in earlier years called for all aircraft to land and to take off to the southwest. This departure track would take aircraft directly over a residential area of some two hundred and fifty homes in the Santa Ana Heights. They then would pass over the north end of Newport Bay, a narrow inlet with luxury housing both to the east ("East Bluff") and to the west ("Westcliff").

Because the area directly northeast of the airport is an industrial zone less sensitive to noise, the airport in 1971 determined that in favorable weather conditions the ordinary landing and take off patterns would be reversed in the morning hours, when the winds are frequently light. Beginning on October 22, 1971 (the year a noise abatement specialist was first employed by the airport), operations on Monday through Saturday were to the northeast between 6:00 a.m. and 8:00 a.m. when the wind was five knots or less, the ceiling was at least 2,000 feet and visibility was three miles or better.

Weather conditions permitted this preferential runway system to operate about 45% of the time. Initial reactions were favorable, and in December 1972 the hours for the system were expanded to 6:00 a.m. to 9:00 a.m. This period covered about 20% of the airport's air carrier jet operations, including the most heavily loaded and noisiest flights of the day. Overall, airport personnel calculate that under the new system residents to the southwest of the airport were trading an average of 7.5 noisy departures for an average of 5.5 quieter arrivals.

Protest arose, however, from a new quarter. After overflying the industrial areas immediately to the northeast of the Orange County Airport, aircraft on the new departure track passed near residential area in the cities of Tustin and Orange. These areas are more than two miles from the airport, and they are far beyond the 70 decibel CNEL line which encloses most of the Santa Ana Heights. Thus, the aircraft noise in the northern areas was far less than in the areas to the south, traditionally overflown by departing aircraft, but the changed pattern did intensify the noise problem for these northern areas. The supervisor who represented this portion of Orange County led a campaign to prohibit the airport from use of the preferential runway system. After a turbulent hearing in a room jammed with residents of Tustin and Orange, the county Board of Supervisors voted three to two on October 9, 1973, to terminate the preferential runway system.

F. Variances and Airport Noise Abatement Planning

Previously it has been emphasized that the key planning device of the California Noise Standards is the variance procedure. The first variance to be granted under the Noise Standards did not, however, involve any abatement planning. In that case--the variance to allow San Francisco International Airport an additional year to complete installation of its monitoring system--no public hearing was held and the findings were largely unsupported boilerplate recitations of provisions from the regulations. The second variance granted was to the Orange County Airport, and it is a much better example of the local agency/state agency noise abatement planning process at work.

The hearing held on Orange County Airport's request for a variance was held by a Hearing Officer from the state's Office of Administrative Hearings, and it was conducted in accordance with the formalities of the California Administrative Procedure Act. A forum was thus provided within which the airport's progress to date could be critically assessed, its plan for achieving compliance by a time-phased implementation plan could be presented for review, and intervenors could represent the views of various interested and affected persons and groups.

The airport initially applied for variances from five different provisions of the noise standards, most of which related to the monitoring system. It was argued, for example, that the accuracy of ± 1.5 decibels required by the Noise Standards is a practical impossibility given present staff, equipment and budget; that the frequency of measurement required for "continuous" monitoring (forty-eight weeks a year) is overly strict, as more time is needed to service equipment; and that specifics in the Noise Standards prescribing methods of calculating CNEL values and the location of monitors are too rigid. Subsequently, however, in an apparent effort to simplify the proceedings, the airport withdrew all applications related to the monitoring system. It continued only with the crucial application for a variance to operate with a noise impact area greater than zero.

To support this application, the airport presented a fifteen element noise abatement program. This included measures on aircraft routing, takeoff procedures, the admonishment program, curfewing and aircraft weight limitation.[139] The airport argued that by means of this program it could achieve a zero impact area by 1979.

In opposition, the intervening City of Newport Beach--Orange County Airport's neighbor to the southwest--argued against the grant of any variance or, in the alternative, for the imposition of stringent and specific conditions upon any variance. These included the following: reinstatement of the abandoned preferential runway system; a requirement that Hughes Air West comply with existing noise abatement procedures as fully as Air California; a program of economic incentives; and prohibitions on an increase in the number of daily departures by existing air carriers, the introduction of any new air carriers, and any remodeling or expansion of terminal and parking facilities.

The Department of Transportation, the agency ultimately responsible for granting or denying the application for a variance and for imposing any conditions, took a much more limited view of what the airport ought to be compelled to do. Innovative measures like economic incentives were deemed not to be the kind of conditions contemplated by the Noise Standards. Other proposals of Newport Beach were objected to by the department as being beyond the jurisdiction of the local government proprietor, or as not being strictly necessary to effect the purposes of the Noise Standards. The department did, however, accept the idea that some specific conditions would be appropriate, and it proposed the following:

> To the extent legally possible, the airport proprietor will make good faith efforts to impose the following requirements on aircraft operations.
>
> 1. Noise abatement approach and departure flight procedures designed to minimize noise in the defined noise impact area.
> 2. Use of flight paths designed to minimize noise in the defined noise impact area, including jet departures to the north when wind, traffic and safety conditions permit.[140]

Three matters were significant with regard to this proposal. Federal pre-emption was dealt with by the initial qualifying phrase. An attempt was made to avoid future lawsuits over violation of the conditions by calling for "good faith efforts" rather than actual achievement. And, by the final portion of condition two, support was given for the reinstatement of the preferential runway system.

On this record, the Hearing Officer adhered largely to the department's position.[141] Utilization of the preferential runway system was made a variance condition,[142] as was airport implementation of its own fifteen element noise abatement program.[143] Although the Hearing Officer found that Hughes Air West had been contributing in an "extremely disproportionate" amount to the airport's noise problem and had been "uncooperative" with regard to airport procedures for quieter landings and departures,[144] the proposed order made no direct reference to this problem. Nor did the proposed order deal directly with economic incentives, level of service or terminal and parking facilities. For the future, the Hearing Officer found that to reduce the noise impact area to zero would cost about four million dollars and could be achieved "over the next few years with the exception of the DC-9 which will take until 1980 to quiet the engine nacelle."[145] It was noted, however, that the major problem is with operating procedures, for which there can be immediate implementation without new technology.

Despite the fact the Hearing Officer's conclusions went little beyond what had been recommended by counsel for the Department of Transportation, there was opposition from two sources in state government to departmental approval of the proposed order. First, the chief of an office within the Division of Aeronautics argued forcefully that no conditions should be attached to a variance when compliance might be achieved informally. Fear was expressed that such conditions would serve as a precedent for requiring conditions in future grants of a variance; that the division might have to revoke an airport's operating permit if there was non-compliance with the conditions; that the matter might be "taken out of our hands" as a result of judicial action by an aggrieved public entity, homeowners association or environmental group seeking to enforce the conditions; and that ultimately such action would seriously jeopardize air carrier transportation.[146] In effect, it was argued that the airport should pursue its own schedule for noise abatement free of any pressure by state government in the form of planning and abatement constraints. Such restraint was justified as necessary for accomplishment of the division's mission as a promoter of air transportation.

A second source of pressure on the Department of Transportation was the Attorney General's Office, which is defending ATA v. Crotti, the lawsuit challenging the constitutional validity of the Noise Standards.

This suit seeks to determine the scope of City of Burbank v. Lockheed Air Terminal, Inc.,[147] in which the Supreme Court held that federal preemption of airspace management prohibits a local government from imposing a night time curfew on a privately-owned airport. That decision spoke to limitations on the exercise of the police power by local government and, inferentially, by state government as well. It left open the scope of the proprietary power of an airport to engage in noise abatement activity such as night time curfews. California, therefore, has taken the position in ATA v. Crotti that the Noise Standards simply provide state assistance to airport proprietors using their proprietary powers to abate noise problems. It is thought to be inconsistent with this position for the state to require a preferential runway system at Orange County Airport as a condition for a variance. To avoid such inconsistency the Attorney General's office opposed approval of the Hearing Officer's proposed order. In effect, the Attorney General's Office takes the position that the state can impose on airports owned by local governments performance standards--e.g., action to reduce a noise impact area to zero--but not program specifications. The former is represented as "assistance" to other entities, the latter as exercise of the police power.

As a consequence of these pressures, particularly that from the Attorney General's Office, the Department of Transportation departed from the position on variance conditions which it had taken during the variance proceeding. The proposed decision of the Hearing Office was not adopted. Instead, after a delay of some six months from the date of submission of that proposed decision, a one year variance was issued to Orange County Airport with more general language on the critical matter of the preferential runway system than had been proposed by the Hearing Officer.[148] In lieu of making the use of this system a condition of the variance, the department's decision required only that the airport reduce its noise impact area to .047 square miles by the end of calendar year 1975, with a reduction to zero anticipated by 1978.[149] The decision dealt with the preferential runway matter indirectly, by the following language giving the airport a compliance "option":

> In lieu of the above 1975 requirement respondent may at its option elect to implement the following, which will be deemed full compliance with this condition for the 1975 requirement. Whenever wind and safety conditions permit and whenever the control tower is operational, respondent shall regulate its airport such that no aircraft taking off shall cause a SENEL value greater than 100 dB, as measured at monitoring station No. 1 between the hours of 7 a.m. and 9 a.m.; provided, that nothing herein shall be deemed to require respondent to limit the hours of operation or otherwise curtail operations at respondent's airport; and provided further that nothing herein shall be deemed to require respondent to take any action prohibited by federal law or regulation...[150]

Any expectation on the part of the Department of Transportation that the general requirement of noise impact area reduction combined with the compliance option quoted above would in practice force Orange County to reinstitute the preferential runway system has not been realized. Instead the airport has announced a revised eleven point "Master Plan of Noise Abatement,"[151] and it has stated that it "cannot" achieve a noise impact area of zero by 1978 as anticipated by its variance.[152] The airport now anticipates that, "through a combination of refined noise abatement procedures; runway extension; quieter jet engines; and land use conversion," the zero figure can be achieved by 1980.[153]

PART II: AIRPORT LAND USE COMMISSIONS

A. Introduction

When the California Noise Standards were promulgated in 1970, the need to deal with land use control in seeking a long-term solution to the airport noise problem was explicitly recognized. Action to deal with noise sources and noise propagation paths was to be complemented by action to deal with the receivers of noise. Therefore one of the six methods suggested to airport proprietors for controlling the impact of airport noise was "[d]evelopment of a compatible land use within the noise impact boundary."[154] It was further noted, however, that the "least desirable" action for achieving compliance with the Noise Standards is land use conversion,[155] for example, the elimination of existing residential development by demolition. Thus, the major thrust of the land use provision in the Noise Standards was to take preventative rather than remedial action.

Land use control in an airport impact zone presents difficult problems for most airport proprietors. The most direct and secure form of control is purchase of title to surrounding land, but in urbanized areas where land prices are high such acquisitions are often financially impossible. The alternative is an exercise of the police power, for example, zoning for uses other than those most sensitive to noise. Except in the rare instance where the entire noise impact area is within the airport proprietor's political jurisdiction, however, the proprietor is powerless to act by direct exercise of the police power.

To find a way out of this dilemma, California turned to the airport land use commission (hereinafter, the "ALUC"). ALUCs had in fact been authorized some years earlier, for legislation enacted in 1967 created an ALUC in each county containing at least one airport operated for the benefit of the general public and served by an air carrier certified by the state Public Utilities Commission or the federal Civil Aeronautics Board.[156] These ALUCs had been created to deal with safety, however, not noise. Furthermore, their powers were entirely advisory, both with regard to airport operation and with regard to the land use authority of cities and counties. In any event, their legislative "creation" was illusory, since the statute provided that no commission was created where city and county government representatives determined that "adequate" provision already existed for a continuing review of land use surrounding airports.[157] In practice, with or without benefit of such a determination, no ALUCs functioned on the basis of the 1967 legislation.

By 1970—after the statutory authority for the Noise Standards had been provided and when these standards were in preparation—the legislature was ready to make the ALUCs more than paper organizations and to give them a broader mandate. Legislation was passed which eliminated the power of local government to opt out of having an ALUC, and which required each ALUC to file a certificate of formation with the Secretary of State by January 1, 1971.[158] In addition, every ALUC was mandated to prepare a comprehensive land use plan for the orderly growth of each public airport in the county and the area surrounding the airport within the commission's jurisdiction.[159]

The 1970 plan provisions clearly, if indirectly, reflected the new concern over airport noise by providing that within its planning area the ALUC could determine building standards, "including soundproofing adjacent to airports."[160] Any doubt was eliminated the next year when new legislation made it specifically the function of an ALUC "to achieve by zoning compatible land uses in the vicinity of all new airports and in the vicinity of existing airports to the extent that the land in the vicinity of such airports is not already devoted to incompatible uses."[161]

B. Formation and Membership

The state legislation allowed considerable latitude as to the formation and membership of the ALUC. A pattern for an entirely new organization was provided: two representatives of the county, two representatives of the cities within the county, two representatives of the airports within the county and one representative of the general public.[162] This pattern was not required, however, if the county Board of Supervisors and a selection committee of mayors from cities in the county determined that "proper land use planning can be accomplished through the actions of an appropriately designated body."[163]

In the counties where the seven airports specially studied for this report are located, the formation pattern has been quite diverse. Only in two—Alameda and Orange—has the statutory pattern for a new organization been followed, and in Orange County this occurred over the strong opposition of the county. In four others an existing countywide or semi-countywide planning body has been designated to act as the ALUC. In San Diego County, ALUC functions are performed by the Comprehensive Planning Organization (CPO), a council of governments which originally was staffed by the county but now is an independent body with representatives from the county and all cities within the county. In San Bernardino County, these functions are performed by the West Valley Planning Agency, a planning body for a region within the county (this region is itself larger than many California counties). In Santa Clara County ALUC matters are dealt with by the Planning Policy Committee, which has representatives of the county and fifteen cities within it. And in San Mateo County, a comparable organization, the Regional Planning Commission, has been given the ALUC function. In the seventh of the counties, Sacramento, the designated body is transcounty in jurisdiction. This is SRAPC, the Sacramento Regional Area Planning Commission, which has planning responsibilities for six counties in the southern Sacramento Valley. For airport noise purposes, however, SRAPC has been designated the ALUC by only four of these counties.

Different problems occur with each of these different organizational forms. A new organization often will have an initial problem establishing its legitimacy and exercising power effectively. In Orange County, for example, the county government spent over a year trying to dissolve the ALUC on the ground the existing county Airport Commission could do everything necessary. When dissolution proved impossible, the county attempted to starve the ALUC out of existence with a budget of $500 per year.

An established organization, on the other hand, may simply ignore its new function. San Diego's CPO until recently seemed to place the ALUC function low on its list of priorities, in part because it has been very much caught up in regional airport planning and studies of potential sites for a new international airport. In fact, the CPO has yet to develop even an interim plan for Lindbergh Field. Another problem occurs because members of regional planning agencies ordinarily have no background on airport noise problems and no involvement which would lead them to acquire such background.

Significantly, in some cases in which the ALUC function has been given to a regional planning organization, effective action has been associated with delegation of the function to a smaller group of people assigned to work on the problems of particular airports. San Diego's CPO, for example, has organized an ad hoc committee for each airport plan. There are some signs this committee system is effective, especially in the effort to create a plan for the area around the Naval Air Station at Miramar.

C. Funding Problems

Funding has been and remains today an important problem for the ALUCs. The 1967 legislation was not entirely silent on funding, for it indicated that counties should bear the financial burden of ALUCs. The county Board of Supervisors was authorized to determine whether to compensate commission members and/or whether to provide reimbursement for necessary expenses.[164] In addition, the county was required to provide staff assistance, including the mailing of notices and the keeping of minutes.[165]

These provisions applied most directly to situations in which the county-city-proprietor form of ALUC was established, yet in one of these two cases the county simply refused to allocate more than a nominal sum to the ALUC. In the face of this recalcitrance by Orange County, the legislature in 1972 strengthened its statute to state that an ALUC's "usual and necessary operating expenses . . . shall be a county charge."[166] Even this was inadequate, for Orange County only provided significant funding when a 1974 Grand Jury report took the Board of Supervisors to task for failing to fund the ALUC, and even this support was less than half the amount requested by the ALUC.

In the five cases where an existing organization has been designated as the ALUC, funding has been supplied by the designated organization rather than by the county. Often such funding has fallen well below what was projected when the ALUC function was assigned to the organization, and in the case of the West Valley Planning Agency almost no funding has been available for ALUC activity.

D. Jurisdictional Questions

1. ALUC Powers Related to Airport Noise Impact

The 1967 legislation on ALUCs gave them powers with regard to the height of buildings "near" airports and, more broadly, land use related to the safety of air navigation.[167] These consisted principally of the power to hold public hearings on these matters and to make advisory findings of fact. The list of subjects within ALUC jurisdiction was lengthened by a provision enacted in 1971 giving ALUCs the power to seek "compatible" land uses for new development near airports,[168] since compatibility must be judged in terms of noise sensitivity as well as height and safety.[169]

Presently, the power of ALUCs to deal with height, safety and noise sensitivity problems in the airport zone is implemented by a two step process. The first step is formulation of a comprehensive land use plan, which "shall include" a long-range master plan that reflects the anticipated growth of the airport during at least the next twenty years.[170] The commission plan is evidently to be one of reconciliation, for it is both to "provide for the orderly growth of each public airport and the area surrounding the airport" and to "safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general."[171]

The second step in the process is control of development which is incompatible with the ALUC's plan. Where a public agency takes action or engages in regulation which is inconsistent with that plan, the ALUC is required to hold a hearing on whether the action or regulation is in the best interest of the airport and the adjacent area.[172] When the answer is "no," the ALUC notifies the public agency in question. The public agency then holds a hearing to reconsider its initial decision. This may be reinstated, but only by a four-fifths vote to overrule the ALUC.[173]

Thus, the ALUC may not have the final word on development within the airport zone, for it may be overriden at the end of this process. It is important to note, however, that the veto/override provisions do give the ALUC some slim measure of mandatory control, for absent a four-fifths override its decision is final. This represents an advance in power from the purely advisory status the ALUCs were first given in 1967.

One question which poses difficulties under the present statutory language is whether an ALUC plan—and the resulting control of new development—is intended to go beyond height, safety and noise sensitivity concerns. On the one hand, the statute calls for a "comprehensive" land use plan,[174] it unqualifiedly states that the ALUC "may specify use of land" within the planning area,[175] and a 1971 statute refers to "zoning" by an ALUC.[176] On the other hand, the ALUC's jurisdiction for existing airports is limited to new development,[177] so comprehensive control cannot be achieved by means of amortization or redevelopment programs; the ALUC function is keyed to the single concern of airport "compatibility",[178] which seems to exclude many other planning concerns such as densities of commercial or industrial development; and the review nature of ALUC activity suggests that it is intended to supplement rather than to replace the comprehensive land use planning now required of all local governments in California.[179] On balance the better reading, and the one more likely to bring efficient and effective ALUCs, seems to be the more limited one: ALUCs have jurisdiction over new developments only insofar as they involve height, safety, noise sensitivity or other matters directly related to airport compatibility.

2. Establishment of Planning Boundaries

ALUC powers, however extensive they may be, are limited geographically to the area within ALUC "planning boundaries." These boundaries are, however, left to each ALUC to establish after hearing and consultation with the involved agencies. Statutory criteria for the establishment of boundaries have not been provided. In practice, the ALUCs have varied greatly in their approach. The West Valley Planning Agency in San Bernardino County (now moribund as an ALUC) took the position that its ALUC planning boundaries include the entire West Valley area—about a third of the entire county. Other ALUCs, however, adopt a much more restrained view. Most use different planning boundaries for each of the three functions of height, safety and noise sensitivity. For height, the boundary is generally defined in accordance with Federal Aviation Regulations (FAR) Part 77, "Objects Affecting Navigable Airspace." For the overlapping safety zone, the boundary is often defined to conform to the outer limit of the airport horizontal surface as defined by FAR Part 77. And for noise sensitivity, the boundary in most cases is defined by the 65 decibel CNEL contour line.

3. Jurisdiction over Airports

Implicit in most of the work to date of California ALUCs is the assumption that they are to function only for the areas around the airport. Indeed, the original 1967 legislation was explicit in stating that ALUC powers shall "in no way" be construed to give the ALUC jurisdiction over the operation of any airport.[180] Although this statement remains in the statute, it must be read with a 1970 addition which requires each public agency owning an airport within the ALUC's planning area to file with the ALUC for its approval "any substantive change in development plans."[181] If the ALUC finds inconsistency with its own plan, then the submitting agency is notified and holds a hearing to reconsider.[182] It may then overrule the ALUC by a four-fifths vote of its governing body.[183]

So far these provisions have been largely ignored by the ALUCs. San Mateo County's ALUC once considered invoking them in an attempt to influence expansion plans at San Francisco International Airport, but it dropped the idea on the ground the statutory language is somewhat unclear. Although the terms "substantive change" and "development plans" do lack precision, it seems certain there is presently a basis for ALUCs exercising some sort of jurisdiction over noisy airports as well as over noise sensitive land uses near those airports.

E. The Land Use Plans

Under current California law ALUCs have only limited control over development in areas surrounding airports, and this limited control can be exercised only when the ALUC has a plan against which local government action can be measured for consistency.[184] At present, the ALUC for only one of the seven airports given special attention has a final plan, although several others have interim plans which they treat as satisfying the statutory requirement. The final plan is that of the ALUC of Santa Clara County,[185] within which the San Jose Municipal Airport is located.

Several points about the Santa Clara county final plan are worthy of special note. First, it is a policy plan, made up of background findings and policy statements. There are no maps to indicate particular uses in particular places. The plan states that such details are best left to the individual jurisdiction.[186]

Second, the plan makes clear that in making land use planning decisions the ALUC will be guided by both CNEL and single event data on aircraft noise. Thus, although the CNEL data is being used to fix the noise impact boundary within which the ALUC will review local government land use decisions for compatibility, single event data will be utilized in the course of the review. The final plan points out that a single CNEL value may in terms of individual aircraft event levels mean wildly different levels depending on the frequency of operations at the airport. Thus, at the 65 decibel CNEL boundary at the San Francisco International Airport single events would average 72 decibels for about five hundred events, but at the same boundary at the San Jose Municipal Airport these would average 81 decibels for seventy events.[187]

Third, the plan stresses the importance of interior building noise control and announces that developers will be required to utilize such control. Detailed tables are provided which show the required building exterior noise reduction for various land uses at various nominal distances from aircraft take-off and landing operations.[188]

Fourth, the plan states that the ALUC recommends to appropriate public agencies the purchase "whenever possible" of lands with existing incompatible uses and their conversion to compatible use.[189] This recommendation runs counter, however, to the policy of the state Noise Standards, which makes land use conversion the action of last resort.[190]

And fifth, the plan states that a condition of approval in all development referrals to the ALUC will be dedication to the airport of an avigation easement placed at the ceiling of FAR Part 77 imaginary surfaces.[191]

Two other ALUCs have promulgated interim plans which approach the detail found in the Santa Clara County plan. The San Mateo Regional Planning Committee has adopted an interim plan, revised May 28, 1974, which states objectives and procedures, provides noise contours and land use compatibility standards and announces implementation procedures. And the Sacramento Regional Area Planning Commission has adopted a "Policy Plan" which sets out land use guidelines, criteria for the establishment of planning boundaries and general policies of the ALUC. This plan together with maps of particular airport planning boundaries becomes the comprehensive land use plan once the maps are adopted.

Progress on plans has been much more limited at the other locations studied. For Oakland the Alameda County ALUC has only a map, which together with certain resolutions has been represented as the entire comprehensive land use plan for the Metropolitan Oakland International Airport. The map and resolution have, however, been judicially declared to be insufficient to constitute the "comprehensive land use plan" required by law.[192] Orange County also has only a map—one presented to it in 1972 by the Irvine Company, a private developer in the area.

The other two counties studied have not even made that much progress for their principal airports. In San Diego the CPO has neither a map showing compatibility zones nor the required comprehensive land use plan for Lindbergh Field; it has devoted its site specific land use activity to Miramar Naval Air Station, for which it now has preliminary policy guidelines for compatible land use. The failure to deal with Lindbergh Field—clearly the major noise problem airport in the county—may, however, be justified by the fact that most land around Lindbergh Field is already developed, and hence, generally not within the jurisdiction of the ALUC.

No similar justification is available for San Bernardino County, for the Ontario International Airport has large quantities of agricultural and other open space land in the immediate vicinity. Most of this land is to the east and south of the airport, with low density residential and commercial neighborhoods dominating the land to the west and north. Very early in the game the West Valley Planning Agency (WVPA), before its designation as San Bernardino County's ALUC for Ontario International Airport, expressed strong concern over noise problems at the airport. A 1970 report on these problems reviewed the airport's rapid expansion from 18,000 passengers in 1955 to 740,000 in 1969, surveyed existing land use within a two mile radius of the airport, and made three principal recommendations. First, it recommended creation of an industrial buffer zone directly west of the airport; second, it suggested that aircraft departing west over this industrial zone should make a hard ninety degree turn south over the open space to minimize overflights of residential areas; and third, it proposed that future expansion needs be met by moving the airport's runways two miles to the east. Such a move was specifically found to be the environmentally desirable alternative for the future.[193]

This carefully prepared report could have provided an excellent policy foundation for particular decisions by the WVPA as ALUC in the years after 1970—indeed, that body might well have emerged as a leader in foresighted airport land use planning. Unfortunately, none of this was to pass. There was intense opposition to the report from certain elected officials who appeared to favor residential development near the existing airport, as well as from airport interests who objected to the cost of moving the runways. Instead of providing a firm policy base for the future, the WVPA's report was a contributing factor to the departure of the county planning director and an exodus of planners from the county's staff.

As a result of this planning debacle, the WVPA was rendered entirely ineffective as an ALUC. Efforts to develop a WVPA plan for Ontario International Airport were abandoned. Instead, the WVALUC (i.e., the WVPA when it sits as an ALUC) has simply adopted city and county general plans as its plan, except that for the City of Ontario it has refused to adopt the city's general plan for the airport area. This decision was based upon the judgment that the city's general plan does not deal adequately with airport noise considerations. Since the WVALUC has adopted no plan of its own for that area, however, it is legally unable to exercise any development review function. In fact, the WVALUC now appears to be moribund. No meeting has been held since the fall of 1973, when hearings were conducted on the Environmental Impact Statement prepared for expansion of the Ontario International Airport.

F. The Decision-Making Process

All the ALUCs studied, from Santa Clara County's with its completed final comprehensive land use plan to San Bernardino County's with no approved plan at all, have attempted to engage in some form of land use decision-making. This section will deal with four topics of importance to this decision-making: the manner in which particular items are referred by local governments to the ALUC; a case study of decision-making by the Orange County ALUC; conditions frequently imposed on approved development by ALUCs, particularly sound attenuation conditions; and the local government "override," as illustrated by a current controversy over major residential development near the Oakland Metropolitan International Airport.

1. Agenda Setting — Systems for Referrals

The statutory provisions which create ALUCs do not give them direct permit control over development within their planning boundaries. Nor do they require local governments with permit control over development or comparable control over subdivision to notify the ALUC of their decisions, although local governments with representation on the ALUC "shall assist in the development of an area plan" and shall file such plans with the ALUC for its approval.[194] Thus, an initial and sometimes serious problem for a California ALUC is to determine what development is planned in an airport impact zone. There is more than one instance of an ALUC commissioner first learning of development near an airport by driving past a nearly completed structure.

The more active and successful ALUCs have succeeded in establishing informal referral systems. In San Mateo County, for example, the agendas for all planning commissions with jurisdiction over land in an airport impact area are routinely forwarded to the staff secretary of the ALUC. The onus is then placed upon the ALUC staff to sift through these in order to discover proposals which might be inconsistent with the ALUC plan. Items discovered by this process are then placed upon an ALUC agenda.

The San Mateo referral system leaves the judgment on consistency to the ALUC staff person who engages in the agenda review. In other jurisdictions, this initial decision on consistency is in practice delegated to the local government itself. In San Diego County, for example, a member of the county planning department staff reviews all land use decisions for areas near airports to see if they are consistent with those CPO comprehensive land use plans which have so far been adopted. Only when this planner makes a determination of inconsistency does the matter go to the CPO for its decision on whether to overrule the local agency. This sytem has been adopted, according to CPO personnel, because the regional planning organization in its ALUC capacity lacks the resources to carry out a large number of reviews.

In counties where the ALUC is less active in its planning, there is sometimes no referral system at all. San Bernardino County is one such situation. In the face of inactivity on the part of the WVPA, one of the cities in the airport noise impact area has simply stopped routing anything at all to the ALUC.

2. Orange County Case Study

In order to obtain a sound understanding of the day-to-day effectiveness of a particular ALUC, decisions of the Orange County ALUC have been reviewed in considerable detail. Each ALUC studied presents significant variation in pattern, but it is nonetheless possible with a reasonable degree of confidence to regard the Orange County ALUC as representative. It had the disadvantage of several early years marked by open hostility from the Orange County Board of Supervisors, with a concomitant lack of funding support. Financial resources were found, however, to allow the commission to perform its obligations without benefit of a professional staff. And it has had the distinct advantage of close cooperation from key personnel at the airport in question.

Records of ALUC actions from May 1, 1971, through July 14, 1974, were reviewed to ascertain the commission's impact on land use planning in its areas of jurisdiction. Some three hundred sixty-three items were considered by the ALUC during that period, including zone changes, tentative subdivision maps and use permits. In sixty-seven of the matters reviewed, the commission raised some sort of objection to the land use decision proposed by local government. In twelve cases outright denial of the project in question was made. In the others, the commission's objection took the form of a conditional denial, an objection of an advisory nature or a suggestion that notice to buyers or sound attenuation requirements be imposed.

The present state of ALUC and local planning commission files permitted follow-up on thirty-nine of the sixty-seven objections interposed during the more than three year period studied. Analysis showed the following disposition of these cases by the relevant city or county planning commission:

ALUC decision followed	9
ALUC decision not followed	10
ALUC decision received too late for consideration.	6
No ALUC decision on file	7
No planning commission action, e.g., as request withdrawn	4
Matter pending	3
	39

On this record the ALUC for Orange County appears to have had rather limited influence. Objections were raised in fewer than 20 of the matters heard, and in only a quarter of these cases was the ALUC decision in fact followed. A close examination of these cases indicates, however, that in some cases where the ALUC decision was not followed the commission nonetheless had an influence, either directly or through another body.

The details of a particular situation may assist in demonstrating this influence. A recent case in Orange County is the "Maschmeyer Annexation." This involved some 3.75 acres of county land which the owners planned for condominium development and proposed to annex to the City of Costa Mesa, a community directly to the west of the Orange County Airport. Here the relevant agency was not a planning commission, but "LAFCO"—the Local Agency Formation Commission, which by California law has jurisdiction over all annexations.

In this instance the county ALUC initially contacted LAFCO to ask that the annexation decision be delayed until LAFCO had determined for the area around the airport the boundaries for the "areas of influence" of the respective municipalities. Shortly thereafter, LAFCO responded by fixing a common boundary between the area of influence of Costa Mesa and that of the neighboring city of Newport Beach. It also indicated that the parcels now falling into the airport's clear zone should be excluded from future annexations.

At about the same time, a member of the airport staff studied the site in question. He reported that although the calculated CNEL is less than 65 decibels, single events at the site have been high enough to disturb sleep and to interfere with speech communications. He further noted that the ALUC plan for the area calls for airport-compatible development only and that the contemplated residential use is not considered airport-compatible. On the basis of this report, the Airport Commission wrote to LAFCO to recommend denial of the application for annexation. Two weeks later LAFCO did deny the application, by a 5-0 vote.

This action did not, however, end the decision-making process. The property owners requested and were granted a public hearing, at which they obtained conditional approval of their application. The condition was a grant to the county, prior to annexation, of an avigation easement covering the property in question. Ultimately such an easement was granted and accepted, and annexation by the City of Costa Mesa took place.

This instance illustrates the real, but limited, influence of the ALUC which appears in several of the Orange County cases studied.

Without the leverage of the ALUC plan showing that the land to be annexed for condominium development falls into an area in which no residential development should take place, the Airport Commission probably would have been unable to affect the annexation in any manner. But in the end it affected it only by obtaining an avigation easement. This should protect the county from liability for damage from airport noise, but it allows the incompatible residential development to take place.

3. ALUC Conditions on Approved Development

The figures noted above on Orange County ALUC decisions show quite clearly that in most cases where an objection is raised, the ALUC did not recommend outright denial of development permission. Rather, by way of a recommendation of conditional approval or denial or by way of an advisory comment, the ALUC sought some modification of the development itself or the plan for marketing the development. In this respect, the Orange County ALUC is quite representative of the commissions studied throughout the state.

One common modification sought by these ALUCs has been the addition of a "buyer notification" provision. Typically the ALUC states that it approves the development in question only if the developer agrees to inform all buyers of the impact airport noise will have on life in the residences in question. Another very common modification sought has been a change in the nature of the development itself, by the introduction of "sound attenuation" measures.

To gain some basis for judging the efficacy of such conditions, an investigation was made of sound attenuation measures required by San Mateo County's ALUC for development located near the San Francisco International Airport. Between the adoption of the Interim Land Use

Plan for this airport in November 1972 and the analysis made in July 1974, the ALUC relied on its plan to impose sound attenuation requirements on forty-two specific proposed developments. These requirements were made known to the developer by means of a form letter. This letter incorporates the noise reduction standard which the Noise Standards lay down for high-rise apartments, i.e., interior CNEL in all habitable rooms of 45 decibels or lower during aircraft operations.[195] It further relies on the developer to furnish appropriate documentation of the steps to be taken, ordinarily in the form of a return letter to the ALUC.

During the time period studied thirty-eight such letters were sent by the ALUC for residential development proposed for land in the 65-70 CNEL impact zone and four more for commercial development in the 70-80 CNEL impact zone. Developer replies were received to only half these letters--exactly twenty-one of the forty-two. In some cases abandonment of the proposed development occurred, but in many others it seems the developer simply disregarded the ALUC "requirement." The ALUC took no steps to follow up in cases where no reply was received, so that for practical purposes from the ALUC's point of view compliance became a voluntary matter. Interviews suggest that this situation existed mainly because of 1) lack of ALUC staff to perform a follow-up function and 2) lack of specific criteria against which proposed insulation measures could be checked.

In instances where the developer did reply, however, some enforcement was provided by another source. Copies of such replies were provided to the planning or building inspection department of the local jurisdiction, and in some cases this department did follow up the matter. In the City of South San Francisco, for example, issuance of a building permit has required that the building plans include the insulation measures specified by the developer in his letter to the ALUC. Furthermore, as part of the "cover-up inspection" of interior structural design, building inspectors have ordinarily checked the insulation measures included in the building plans. Comparable enforcement measures have been taken by other cities near the airport, for example, Millbrae, San Bruno and Daly City. Some, in fact, anticipate future monitoring to ensure that interior noise levels are in fact 45 decibels or less.

It thus appears that despite the absence of systematic follow up by the San Mateo County ALUC itself, its initiatives in the area of sound attenuation have had some beneficial impact. These efforts should be reinforced in the future by the fact that effective August 22, 1974, the state Department of Housing and Community Development promulgated noise insulation standards for all residential structures other than single family detached dwellings.[196] These require that with windows closed the interior CNEL attributable to exterior sources shall not exceed an annual CNEL of 45 decibels in any habitable room. They further require that for structures to be located within an annual CNEL contour of sixty decibels a detailed acoustical analysis shall be prepared showing that the structure has been designed to limit intruding noise to the prescribed allowable levels. This requirement has been little noticed to date, although it may carry all the explosive potential of an environmental impact statement requirement.

4. Local Government Overrides: The Harbor Bay Isle Controversy

A dominant feature of California's ALUC legislation is the provision that, where an ALUC after a hearing determines that public agency action is inconsistent with the commission's comprehensive land use plan, the public agency shall hold a hearing on the matter and may thereafter overrule the commission by a four-fifths vote of its governing body. This provision, which seriously weakens the hand of ALUCs throughout the state, was deemed a political necessity in 1970 when the ALUCs were for the first time given a measure of power. In the years since 1970 it inevitably has forced each ALUC toward moderation and compromise with local governments taking positions in conflict with those of the commission.

In order better to understand the dynamics of a situation in which local government overruling (an "override") occurs, as well as to learn more about the impact of an overridden ALUC, considerable detail will here be presented on a single controversy. This controversy, now the hottest airport-noise land use matter in California, deals with a proposal to develop for predominantly residential purposes several hundred acres of land lying very close to the Metropolitan Oakland International Airport. Background information essential to an understanding of this controversy will first be presented, then recent actions by the involved public agencies will be reviewed.

a. Background

When the City of Oakland planned many decades ago to construct a municipal airport, the site selected was a peninsula in San Francisco Bay known as Bay Farm Island. The area was then sparsely populated, with truck farming as the principal economic activity. In 1927 the airport, now known as the North Field, opened at a location in the base of the peninsula. Although this portion of Bay Farm Island is part of the City of Oakland, the upper portion or "tip" of the peninsula is a part of the City of Alameda.

A situation of relative stability and compatibility between the aviation activity at Oakland's North Field and the agricultural activity in Alameda's portion of Bay Farm Island prevailed until well into the 1950s, when the tensions which have led to today's acute conflict began to appear. At that time both Oakland and Alameda developed plans for expansion which were keyed to dredging and filling of nearby submerged tidelands. On the one hand, Oakland planned and constructed on bay fill a 10,000' runway, which constituted a portion of its new South Field. This runway, which today is the airport's major facility for jet air carrier service, is unique in having both approach and departure areas directly over water.

At the same time, Alameda formulated plans for the use of some of its submerged tidelands areas. Over nine hundred acres of submerged tidelands off Bay Farm Island were zoned by the City of Alameda for residential, commercial and industrial development. In addition, individuals were allowed to construct single family residences in the "Highlands," the existing dry land portion of Bay Farm Island adjacent to the North Field. Over one hundred such residences were built in the 1950s, leading to gradual decline of the area's truck farming.

During the 1960s, each side in the present controversy moved closer to the inevitable confrontation. The City of Alameda allowed residential development in the Highlands to proceed, so that many hundreds of additional homes were constructed as the Highlands built toward its present population of about 4,000 people. Oakland in 1964 initiated an action to condemn a noise easement over 94 acres of noise impacted residentially zoned property on Bay Farm Island, an action it brought to a successful conclusion in 1969. And Alameda continually encouraged private development interests to formulate plans for the reclamation of tidelands off Bay Farm Island. After one such plan was approved in 1964, the developer encountered financial difficulty and had to withdraw. In 1965, however, an Alameda firm known as Doric Development combined with Utah International, Inc. to form a joint venture, Harbor Bay Isle Associates ("HBI"). Between 1966 and 1968, HBI expended some $37 million in diking 908 acres of submerged tidelands and filling them with sand purchased from the City of Alameda.

With an investment of this magnitude in the areas which it had diked and filled, it was clear HBI would press for approval of a development plan which would bring it an acceptable return on investment in the near future. In 1972, HBI's proposal was presented: a community, predominantly high density residential in character, with an estimated population of 25,000. The proposal included a number of unusual features: a lagoon system fed by continuously circulating water from San Francisco Bay; housing clustered in small villages, each with specific neighborhoods of designated social character (e.g., families with children v. childless households); recreational and open space areas in the form of large island "commons" in the lagoon; and structural measures to decrease dependence on traditional modes of transportation, for example, by automatically supplying each home with an electric car for short haul trips.

b. Recent Public Agency Actions

HBI's proposal led to immediate and pointed concern on the part of the Alameda County Airport Land Use Commission. This ALUC had begun its work in 1971 by adopting planning boundaries for three airports within its jurisdiction (including Metropolitan Oakland International Airport), and from 1970 to 1972 it had entertained many expressions of concern about conflict between the Oakland airport and both existing and proposed residential development on Bay Farm Island. No land use plan was adopted, however, until on April 12, 1972, the ALUC adopted an interim plan for the Bay Farm Island portion of the Oakland Airport planning area. And--under pressure from the City of Alameda and doubtful at the time of its power to limit residential development--the ALUC in its interim plan simply adopted the land uses shown for the area on the city's general plan. This step was taken in large part on the assumption development by HBI would begin with areas furthest from the airport and consequently least subject to aircraft noise exposure.

Shortly thereafter, on the petition of the City of Alameda and the HBI developers, the ALUC recommended to the county Board of Supervisors that the airport be determined to have a noise problem. The determination was made, the airport was brought within the regulatory scheme of the state Noise Standards, and the stage was set for a bitter controversy over the meaning of those standards for local land use decisions. This controversy has occupied the principals since 1972, and it continues today in litigation brought by the Port of Oakland to invalidate decisions made by the City of Alameda.

Although the determination in 1972 that the Oakland airport has a noise problem was justified largely by a noise complaint history related to the North Field, where business jet and occasional air carrier jet departures have prompted complaints from residents of the Highlands, the determination subjected the entire airport to requirements that noise monitoring be undertaken and a noise impact boundary be prepared. Although the parties to the land use controversy have in fact been unable to agree on the present location of the noise impact boundary for different CNEL values, most of the debate on contours has gone into their probable location at various points in the future. In this debate all sides seem to have accepted the principle that land use decision makers, whether the City of Alameda or the ALUC, should not now approve residential development if in the future that development will exist within the relevant noise impact boundary for the Oakland airport. The boundary which has received the greatest attention is the 65 decibel CNEL line as of the beginning of 1986.

The location of this boundary cannot, of course, be determined by measurements made now. It is a projected boundary, but it must be used for contemporary land use decision making. Its location turns almost entirely upon certain key assumptions which are made about future developments in aircraft construction and modification, in fleet mix, and in utilization patterns and service functions of the Oakland airport. In fact, most of the predicted noise contours at the heart of this controversy have been prepared by a single contractor. The contractor has used the same methodology and assumptions about airport operational conditions for each client, but other assumptions have been varied given the client's view of future developments. The principal assumptions to be varied have dealt with the level of activities to be anticipated, the daily allocation of flights, use of a particular flight track and runway use. Each of these factors has become a point of contention in the Harbor Bay Isle dispute and will be summarized here.

Level of activity projections for Oakland have been heavily influenced by the final plan of the "Regional Airport Systems Study," an endeavor of the Association of Bay Area Governments (ABAG). This plan, prepared by a Regional Airport Systems Study Committee (RASSC), was adopted as an element of ABAG's regional plan on November 30, 1972.

The plan used an assumed historical relationship between population, income, and employment and the generation of local and visiting air passengers for the Bay Region (a nine-county region including San Francisco and its environs) to forecast an enormous growth in air passengers. Whereas in 1970 airports in the region accommodated approximately 20 million annual passengers (MAP), the RASSC study forecast 28 MAP in 1975, 44 MAP in 1980 and 72 MAP in 1985. Thus in a fifteen year period, nearly fourfold growth was predicted, with a very large percentage of this growth targeted for the Oakland airport. Although in 1970 this airport had only 1.71 MAP, the initial RASSC forecast was 13 MAP by 1980 and 24 MAP by 1985. Subsequent supplementary studies indicate, however, a view that 13 MAP at Oakland will not be obtained until 1985 or later. This level of passenger activity is estimated as a function of 179,000 annual operations, 173,600 of these by air carriers.

The aviation consultant for the City of Alameda during the early 1970s provided forecasts of much lower activity at the airport. By assuming that until 1980 Oakland will not be taking traffic overflow from San Francisco International Airport and consequently that annual growth till 1980 will average only 10% and by assuming further an annual growth rate of 17% from 1980 to 1985, an estimate of 9.5 MAP was reached for 1985. With a passengers per operation factor of 110 by 1985, this brought an estimate of 85,000 air carrier operations — less than half the number projected for 1985 by RASSC. These different projections in level of activity have been one major factor influencing the radically different contours predicted by parties to the Harbor Bay Isle dispute.

Similar differences in assumptions exist for a series of other matters. With respect to allocation of flights to daytime or night time hours, the airport estimates the present night activity of 10-13% of all operations will be 20% by 1985, whereas the developer's figure is 10%. Since the noise from night operations is weighted very heavily in calculating CNEL, the impact on contours of a higher percentage of night activity is significant. With regard to use of a flight track which is used today by some training flights and by some flights of commuter airlines, the airport estimates this track will be discontinued by 1986, whereas the developer estimates continued utilization at a reduced level. Continued utilization would mean a lessened noise impact, as this track is a favorable one from a noise point of view. With regard to departure/arrival allocations, the developer assumes a higher percentage of arrivals over the critical noise impact area than does the airport, and again this assumption leads to an estimate of reduced contours.

As a consequence of the assumptions about the future selected by the principals in the Harbor Bay Isle land use controversy, their conclusions on CNEL contours differ radically. The contrast is nearly total: the airport proprietor's projection of the 1985 65 decibel CNEL contour encompasses almost the entire area HBI wants to develop, while the projections of the developer and the City of Alameda for the same contour include almost none of this area.

In the face of these contrasting projections, the Environmental Impact Report (EIR) prepared on the HBI proposal steered a middle course.[197] The 1985 level of activity at Oakland will, according to the EIR, "approach 9.5-12 MAP with a PPO [passengers per operation] factor in the range of 84-100. This implies a 45-51% average occupancy load and 95,000-144,000 annual operations."[198] If by 1985 Oakland has more scheduled airline activity, night operations will be "in the range of 11-15%."[199] The disputed flight track will continue to be used, but not at present levels. And departure/arrival allocations will be less favorable for noise abatement over Bay Farm Island than estimated by the developer, but more favorable than estimated by the airport proprietor.

In addition to taking a middle or compromise position on the key disputed assumptions, the EIR questions the conclusion that aircraft using the airport in 1985 will have been retrofitted so as to comply with the FAR Part-36 fleet noise requirements. The principals in the HBI controversy have disputed the speed with which such compliance will be achieved, but the airport proprietor's estimates for 1985 assume 100% retrofit. The EIR concludes, however, that "it would not be prudent at this time to assume that all jet aircraft using OAK by 1985 will comply with FAR Part-36 regulations."[200] Instead it assumes "Case A" of engine noise reduction to the extent possible from "nacelle treatment for all jet engines together with a power reduction during takeoff operations."[201] On this assumption, and using the compromise positions assumed on the other factors, the EIR estimates for 1985 contours in which the 65 decibel CNEL cuts across the middle of the disputed area. In fact, this projection provided by the EIR in 1973, after extensive input and much dispute, is close to the 65 decibel CNEL contour projected for 1985 by the earlier RASSC study.[202]

In the face of so many debatable and controversial factors and the compromise position taken by the EIR, it is hardly surprising that the Alameda County ALUC also has reached compromises in fixing the 1985 65 decibel CNEL contour to be used in its decision-making. It has been faced with an unusual situation in one respect, for ordinarily one expects an airport proprietor to make assumptions which support the conclusion that the airport's noise environment will improve over time. The airport proprietor, at least the airport proprietor currently operating a large airport in California, is faced with the prospect of numerous inverse condemnation and nuisance lawsuits, and ordinarily it will seek to put a better face on the future. The Port of Oakland, however, anticipates a much worse noise environment in the future. This could be seen as simply the logical consequence of planned airport growth which the proprietor believes should and will take place. Or it could be seen as a manipulation of the assumptions which determine the judgment as to whether there can be both airport growth and an improved noise environment. To the extent that the airport's position is seen as an attempt to manipulate assumptions so as to preclude residential development which might someday prove troublesome, the process of contour projection becomes a political rather than a technical process.

In the Harbor Bay Isle controversy, two highly powerful land developers have been locked in combat which in fact seems fundamentally to have been more political than technical. The ALUC, faced with the Port of Oakland on one side and HBI and the City of Alameda on the other, also has treated the matter as fundamentally political and has sought to compromise. In April 1972 the ALUC adopted a land use plan for the Bay Farm Island portion of the planning area for the Oakland airport which essentially reflected the land uses shown for that area by the General Plan of the City of Alameda. These permitted residential use, even within those areas which the RASSC preliminary study of 1970 had shown would lie within a 65 decibel CNEL contour.

Thus the ALUC initially took a position which formally accorded with that taken by the City of Alameda, but at the same time its resolution included a finding that "the circumstances require that an immediate action be taken on a portion of the area within the planning boundaries of the Metropolitan Oakland International Airport so as to forestall a conflict in land uses."[203] One commissioner recalls that the ALUC did not then take such action because it felt it lacked legally supportable criteria by which it could limit residential development.[204] This lack was felt with particular force because by 1972 the City of Alameda had made clear its strong determination to resist any limit on its plans to approve the HBI proposal.

Subsequently the ALUC held extensive hearings on its land use plan. As a result, by a 4-3 vote, it amended its earlier plan to project a 65 decibel CNEL contour for 1985 which cuts across the middle of the area in which HBI proposes predominantly residential development. As justification the ALUC in its formal resolution adopted October 10, 1973, noted that ABAG in adopting the RASSC plan projected "an increasingly larger role as a regional airport" for the Oakland airport, that this role is "materially dependent upon the compatibility of land uses," and that consequently the ALUC's land use plan requires amendment to ensure greater compatibility.[205]

In addition to altering the 65 decibel CNEL contour projected for 1985, which it termed the "line of demarcation," the ALUC moved in several other ways to tighten its control over development on Bay Farm Island. It flatly prohibited additional dwelling units south of the line of demarcation. It provided that in areas north of the line, where residential development was permitted in principle, "specific approval" of the ALUC would be necessary for any building such as a school which would result in a concentration of population. And it required for non-residential areas that the City of Alameda adopt "noise and safety standards which this Commission has approved as adequate to protect the public safety, health, and welfare."[206]

These decisions placed the ALUC much more in a middle position vis-a-vis the airport proprietor and the developer and city than had previously been the case. The hearings had given the ALUC an opportunity to ventilate the basic dispute, action by ABAG was seen as regional support for the airport proprietor's position, and there had been the beginnings of opposition to the original HBI plan within the City of Alameda itself. This opposition had resulted in a measure on the ballot, approved by the voters in March 1973, which prohibited further construction of multiple unit dwellings within the City of Alameda. The measure, now under challenge in the courts, aimed to reduce population density within the HBI development. Voters supported it more from concern over traffic generation and circulation problems in the City of Alameda and devotion to a "no growth" attitude than from concern over airport noise problems, but it had forced the developer to redesign the project. Multiple dwellings which the developer apparently once hoped ultimately would be approved for location within the 65 decibel CNEL contour had been altogether eliminated. With lower densities planned for the entire development and with no possibility of residential development within the 65 decibel CNEL contour, it had become even more important to the developer to show that this contour presently is located and through 1985 will remain located south of the area planned for residential use. Thus the ALUC's decisions of October 1973 were a severe set-back for the developer.

Further skirmishing ensued over the current location of the 65 decibel CNEL contour. The proprietor produced data placing this contour along the northern edge of the existing Highlands development, a line somewhat north of that suggested by the 1970 RASSC study. This was disputed by the city. Work by a state agency, the Division of Aeronautics, pursuant to review of a proposed school site, tended to confirm the proprietor's position. As a result a motion was made at an ALUC meeting to relocate the "line of demarcation" further to the north. Technical considerations suggested that such a change would be appropriate, but again the process was more political than technical. The motion was defeated, 5-2, with the commissioner from the airport voting against such a change. The attempt was to hold to middle ground, to continue what was seen as a compromise on the hope the City of Alameda might agree.

The city, however, remained thoroughly committed to the lower-density, predominantly residential development on Bay Farm Island then being proposed by HBI. Despite the ALUC line of demarcation, in April 1974 rezoning and tentative subdivision map approval was given for residential development south of the line. The ALUC formally found that these decisions were incompatible with the ALUC land use plan. On August 6, 1974, in one of the most significant "overrides" in the history of the California ALUC, the City of Alameda's city council voted unanimously to overrule the Alameda County ALUC. Although the override can be seen as reflective of a different judgment on the technical factors involved, or as a judgment regarding the appropriate trade-off between the noise impact of principal concern to the ALUC and other matters of concern to the city council, interviews suggest that the key issue for the city council was local control. Faced with another government body taking significant action on land use matters the city regards as within its exclusive jurisdiction, the city council was unwilling to agree to any compromise. And judicial challenges by the Port of Oakland to this exercise of local power have to date been unsuccessful.[207]

PART III: NOISE ELEMENTS IN GENERAL PLANS

California, as part of a general trend toward greater state involvement in local planning, has in recent years amended its planning laws to require that various "elements" be included in local general plans.[208] This trend has been marked by resistance from some local planning bodies which resent state intrusion and complain they cannot afford to do the mandated studies.

In 1971, noise was added to the list of elements required by the legislature. This element must, in "quantitative, numerical terms," show contours of present and projected noise levels associated with all existing and proposed major transportation elements.[209] The contours are to be shown in minimum increments of five decibels and are to be continued down to 65 decibels or to 45 decibels for regions involving hospitals, rest homes, long-term medical or mental care, or outdoor recreational areas.[210]

The Noise Element is intended to serve as a tool for designing noise-sensitive transportation and land use policies. Each general plan is required to include conclusions "regarding appropriate site or route selection alternatives or noise impact upon compatible land uses."[211] An attempt to force action consistent with these conclusions, along with others in the general plan, is made by twin requirements that all zoning conform to the general plan,[212] and that mandatory elements of general plans be amended no more than three times a year.[213]

Although the requirement for noise elements has now been in California's statute books some three years, relatively few counties and cities in fact have final noise elements. As part of this study officials in planning departments of counties and cities adjacent to the seven airports selected for special study were contacted in order to ascertain the current status of the Noise Element. All such officials were aware of the requirement and in most cases preparation of the element had been initiated. On the whole, however, progress has been slow.

Frequently local governments use consultants to produce their noise elements, and often draft and even final elements contain mostly background material which, strictly speaking, is superfluous so far as the requirements of the statute are concerned. An example is the Noise Element for the City of Irvine, one of the few local governments contacted to have completed its element. A substantial portion of this Noise Element is devoted to a background discussion of the phenomenon of noise, systems for measuring noise and figures to demonstrate such things as relationships between airport impact zones and land use compatibility. No noise contours for transportation-related noise sources are provided, much less contours with increments of five decibels. As for policy-oriented conclusions, these are stated, but in an extremely general fashion. Thus, one finds as policies statements that the city shall "phase development to avoid existing noise impact areas until operational changes and other noise abatement measures are implemented" and shall "work with the Orange County Airport Land Use Commission in developing a plan for compatible use in airport noise and crash hazard areas."[214]

In some instances local governments ambitious to comply with the full letter and spirit of the state requirement have found themselves thwarted, with regard to airport noise, by a refusal of the airports in question to cooperate. The state legislation, in fact, addresses itself to the question of interagency cooperation, as follows:

> The state, local, or private agency responsible for the construction or maintenance of such transportation facilities shall provide to the local agency producing the general plan, a statement of the present and projected noise levels of the facility, and any information which was used in the development of such levels." (Emphasis added.) 215

The reference "such transportation facilities" is to an earlier listing of "major transportation elements," which is stated to include but not be limited to: (1) Highways and freeways, (2) Ground rapid transit systems, and (3) Ground facilities associated with all airports operating under a permit from the State Department of Aeronautics.[216]

In some cases airports have seized on the fact that air facilities (i.e., aircraft) associated with airports are not mentioned in this listing, and they have argued that consequently airports are under no obligation to supply local governments with noise levels insofar as they derive from aircraft rather than ground facilities at airports. In effect, they argue that aircraft using airports are not "major transportation elements" (although airport ground facilities are), so that local governments should not take them into consideration in the preparation of noise contours. Precisely this argument has been employed by the City of Los Angeles Department of Airports to justify its refusal to supply aircraft-related airport noise data regarding Ontario International Airport to the neighboring City of Montclair.

PART IV: FINDINGS, CRITERIA AND RECOMMENDATIONS

A. Findings Regarding the California Airport Noise Control System

1. Although the airport noise control system established by the California Noise Standards contains many useful elements, so far the stated goal "to cause the airport proprietor, aircraft operator,

local governments, pilots and the department [state Division of Aeronautics] to work cooperatively to diminish noise" is largely unachieved.

2. The triggering mechanism for the California Noise Standards is a determination that a particular airport has a "noise problem." Determinations have been made informally, and the determination process has not been a source of inordinate delay. Considerably more airports have been determined to have noise problems, however, than was anticipated by those who drafted the standards.

3. The California Noise Standards provide for detailed and sophisticated aircraft noise monitoring systems at airports determined to have a noise problem. Although the high degree of accuracy and comprehensiveness which is now required is difficult for many airports to achieve, the monitoring requirements are now generally complied with by several airports.

4. In those instances where aircraft noise monitoring systems have been established, both the single event and the community noise equivalent level data have contributed significantly to awareness of airport noise problems. They allow the issue to be forced, provide a means for evaluation of the efficacy of different abatement strategies, and permit the preparation of contour lines which are useful in the development of land use policy for the airport impact zone. The single event data allows the performance of particular pilots to be evaluated and thus is most important for precision and effectiveness in enforcement.

5. Some California airports required by state law to have aircraft noise monitoring systems have made very little or no progress toward acquiring such systems. The "go-slow" attitude of these airports is principally the result of fear that monitoring data will be used against the airports in private lawsuits, although technical and fiscal

aspects have been contributing factors. The attitude has been permitted to flourish because of widespread doubt over the legality of the California Noise Standards. Both many of those subject to the standards and the enforcement agencies in California have taken a hands-off attitude pending resolution of ATA v. Crotti.

6. The most successful aircraft noise monitoring program in California is that at the Orange County Airport. Monitoring data there has been used to develop an abatement strategy which is effective. This success cannot, however, be credited primarily to the California Noise Standards. The Orange County Airport program was underway prior to implementation of the state standards, and its primary impetus comes from a combination of intense political and litigation pressure generated within highly affluent communities near the airport and a responsive and aggressive attitude on the part of airport management. Management's chief enforcement tool has been threats of exercise of its power to exclude excessively noisy aircraft or air carriers, rather than any tool provided by the state. The state standards have, however, been important insofar as the variance hearing process has provided a forum for official resolution of local controversies over particular aspects of the abatement program.

7. Airport noise monitoring programs in California have occasionally incorporated a visual display component. This component is potentially an important part of the public education necessary for full understanding of airport noise problems. Limited surveys of airport passersby at San Jose Municipal Airport's visual display indicate, however, that maximum public education impact is not now being achieved.

8. Site specific airport noise abatement planning has not

been greatly stimulated by the California Noise Standards. The standards use a variance process to require such planning, and in principle this variance process should go forward concurrently with the establishment of monitoring. In practice, however, airports have treated monitoring as a prerequisite to application for a variance, and no enforcement authority has challenged this interpretation. To date the only noise abatement plan adopted pursuant to a variance proceeding in California is that for the Orange County Airport.

9. Public access to significant airport noise information and to the decision-making process on abatement strategy has been limited in the experience to date with the California Noise Standards. The standards provide for public access through the public hearing process in variance application proceedings. Amendments to the authorizing legislation, however, provided for extensions of time limits for monitoring without any public hearing process. Furthermore, opportunities to request public hearings on variance applications have been lost because there is no requirement that the Division of Aeronautics make public the fact that application has been made for a variance. In general, many airports subject to the Noise Standards have been reluctant to provide outside individuals or groups with detailed information on the airport noise environment. In some cases this reluctance has extended to requests of governments which need the information to use in the preparation of Noise Elements for General Plans.

10. Enforcement has been the single most significant problem with regard to the California Noise Standards. Doubts over the legality of the standards and the outcome of the ATA v. Crotti litigation have greatly inhibited effective enforcement of the standards. Even without this litigation, however, it is likely the standards would not have

been enforced effectively. Responsibility for enforcement of the standards is given to counties, rather than to the state agency which promulgated them. The state agency has disclaimed even a secondary responsibility to see to their enforcement. The counties are often inexperienced with regard to the subject matter of the Noise Standards, and county officials are subject to local political pressures which often militate against vigorous enforcement. Furthermore, in many situations the airport in question is owned by the county within which it is located, so that the county in effect would be enforcing the Noise Standards against itself. In general, California counties have not shown an interest in aggressive enforcement of the state standards.

11. The California Noise Standards provide a regulatory scheme keyed in several ways to land use in the impact zone surrounding the airport. The most important link is found in the prohibition against operation of an airport with a noise impact area of other than zero without a variance. Although the Noise Standards specify that development of compatible land use within the noise impact boundary is a principal method of airport noise impact control, the standards themselves provide the proprietor with no tools to ensure compatible land use within the noise impact boundary.

12. Airport Land Use Commissions (ALUCs), which California law establishes outside the framework of the Noise Standards, have performed useful service in dealing with airport noise problems, but their impact has been minimized by severe organizational, fiscal and jurisdictional constraints. In addition, the authorizing legislation is poorly organized and drafted.

13. The majority of counties studied assigned the ALUC function to an existing organization. Where the statutory formula for establishment

of a new body with county, city and proprietor membership has been utilized, staff work for the new body has been provided in large part by the county planning department. In effect, therefore, the ALUC often represents more conceptualization of a new function than creation of a new and independent organization. There are immediate advantages of staff availability in this functional approach, but often the new function is placed low among the priorities of the existing organization.

14. The statutory formula for an ALUC suggests a framework within which competing entities will work out a compromise of their interests regarding a single airport. Since the ALUC has jurisdiction for an entire county, however, the commission's membership according to the statutory formula does not comprehensively represent the entities interested in each airport within the county.

15. Whether the statutory formula or an existing organization is used to "form" an ALUC, effective work has required the ALUC to proceed largely on an airport-by-airport basis. This procedure appears most effective where it is manifested organizationally by creation of an entity such as a subcommittee which deals only with a particular airport.

16. The countywide jurisdictional basis of most ALUCs has in some cases been an impediment. Only in the Sacramento region is there an ALUC with transcounty jurisdiction. Elsewhere, the county-based ALUC deals with problems which often are exacerbated by regional decisions. For example, in the San Francisco Bay Area the regional decision of ABAG to assign an increasing proportion of Bay Area air carrier service to the Oakland airport made the work of the Alameda County ALUC far more difficult. Even transcounty ALUCs lack, however, jurisdiction over matters such as allocation of air carrier service

growth within a region.

17. Funding has been a critical problem for many ALUCs. No independent funding mechanism is created by the legislation which establishes ALUCs, and counties often have been reluctant to fund the ALUC function at an appropriate level.

18. The ALUC planning function has not been properly developed for most airports in California. Although there is some doubt as to whether the ALUC planning function is intended to be general and comprehensive or whether it is intended merely to supplement existing local government planning to ensure compatibility between the airport and land use in the airport impact zone, the latter appears the better view. The more limited planning has not, however, been properly done for many of the airports which were studied. Where plans have been adopted, they frequently have amounted only to an endorsement of the existing plan for the area developed by a county or a city. Rather than a tribute to the quality of local government land use planning for airport zones, this result appears testimony to a failure by understaffed and inadequately funded ALUCs to do the job which the California legislation contemplates. Furthermore, very little state leadership has been exercised with regard to ALUC work.

19. Land use decision-making by ALUCs has been hampered in some instances by lack of knowledge as to development approved by local governments for the impact zone. An interested and aggressive ALUC can, however, work out informal referral systems which are satisfactory.

20. A part of the work of California ALUCs has consisted of the development of conditions placed upon approved development within the airport impact zone. Quantitatively few such conditions have been successfully imposed, but with increased experience ALUCs should

have greater success with such conditions. In some instances the ALUCs have failed to ensure that the conditions imposed are in fact complied with by the developer in question.

21. The power of local government to override an ALUC determination upon a four-fifths vote severely restricts the power of the ALUC. In practice in many situations it converts the ALUC into virtually an advisory body. Unless the override provision is removed it is highly unlikely ALUCs will have major impact on airport zone land use problems in California.

22. A second major constraint on ALUC power is its lack of jurisdiction over airports themselves. Although the law seems to provide for some limited ALUC control over the development plans of airports, uncertainty over the meaning of the legal provision has inhibited attempts to use this control. In most situations airport operation, airport expansion and comptaible use of land in the airport impact zone are all intimately linked. The ALUC's effectiveness, both actual and potential, is curtailed by doubt as to its jurisdiction over airport development plans and by the lack of any authority to deal with airport operations.

23. The Noise Elements required for General Plans by California law have not yet been put in final form by many of the jurisdictions contacted in this study. Those which exist do not appear to have major significance for resolution of airport land use problems.

B. Criteria for a Desirable Airport Noise Control System

As a preliminary to recommendations on means for achieving federal involvement in effective airport noise control, it is helpful to have in mind the principal characteristics of a good airport noise control system. On the basis of the study and findings made with regard to the California system, the following general characteristics are suggested as desirable:

1. A set of principles defining the goals and priorities of the regulatory system.

2. Reliable and objective mechanisms for evaluating the current noise environment at particular airports.

3. Mechanisms for site specific planning which:

a. Permit all affected parties including the interested public to participate;

b. Make use of regional airport plans and have influence upon regional airport planning decisions; and

c. Integrate development control over the airport impact zone with control over the operation and development of the airport itself.

4. Mechanisms for evaluating the efficacy of particular abatement strategies and the progress being made toward regulatory goals.

5. Strong enforcement capacity.

C. Recommendations for an Airport Noise Control System with Federal Involvement

1. Federal action should be taken to define the goals and priorities of the airport noise control system. This should include definition of an optimal situation and a target date for the achievement of that situation. The California system defines the optimum in part in terms of zero incompatible land use within the contour obtained by use of a particular criterion noise exposure level. This definition has proved workable in practice and deserves careful consideration by

concerned federal agencies. The federal action should establish airport land use compatibility goals as minimal standards, so that states are free to establish stricter standards for themselves if they so choose.

2. The federal government should take steps to require that each state develop a program aimed at meeting the established federal goals. Such a course is preferable to direct dealings between the federal government and noise problem airports and their neighbors. Although the latter course is simpler in organizational structure, it would present the federal government with far more discrete problem situations than can feasibly be managed. Furthermore, airport proprietors and local government are often far more ready to cooperate with the state government than with the federal government in matters of environmental protection and land use control. This recommendation anticipates, however, that as a corollary to federally mandated state airport noise control programs the federal government would directly exercise some control over airports by means of an airport noise certification system.

Comment. This recommendation may to some extent seem inconsistent with findings above which reflect the passive attitude the California Division of Aeronautics has taken with regard to airport noise control. This attitude seems to have resulted from a combination of factors, viz. the conservative attitude taken by the state's political leadership on environmental matters in recent years; the uncertainty created by ATA v. Crotti; the lack of any funding source to support extensive state work on airport noise abatement; and the initial decision taken by the Noise Standards, reflecting a statutory mandate, to place primary enforcement responsibilities upon the counties. Some of these factors, such as the challenge to state power on federal preemption grounds, would not affect a federally created program. Others, such as the lack of a funding source, are subject to correction in a redesigned program. Doubtless the use of an additional layer of government carries with it some inherent risks, but on balance these appear acceptable. A major advantage of the course proposed is that in effect the federal government would be requiring states to exercise the power they hold over local governments regarding land use control. Absent state involvement, the federal government lacks legally effective and politically acceptable tools for exercising direct control over local government land use decisions.

3. The state program required by the federal government should meet federal criteria based upon the characteristics outlined above in sections IV (B) 2-5. Thus, states should be required to ensure that aircraft noise monitoring or comparable systems are developed which permit one to evaluate the current and developing noise environment at particular airports. Consideration should be given to use of a uniform methodology for this purpose. States should also be required to ensure that site specific noise abatement planning is carried out in a way which ensures that regional airport planning, airport operation and airport impact zone land use considerations are treated in an integrated fashion. Such integration would go well beyond the California ALUC experience and would require that either a regional or a state body would assume major control over certain decisions of both airport proprietors and local governments with primary land use planning jurisdiction over land in airport impact zones. This control should not be subject to any sort of override by affected local governments.

4. State programs should not include any elaborate airport classification process. An informal system such as California's "noise problem" determination system works well and avoids the opportunities

for delay and dispute inherent in classification schemes.

5. A crucial point is the method by which the federal government ensures that states develop acceptable airport noise control programs and then take the necessary steps to ensure their implementation. Direct statutory mandates are one method. In addition the federal government should seek to link federal money for airport management and development to state compliance with federal airport noise control requirements. This link should be made as well if federal funds are provided to assist airports in the payment of noise-related money judgments. In effect, the federal government should say to states that without such compliance federal airport money will be sharply curtailed or suspended altogether.

NOTES

1. E. Murphy, *Governing Nature* 27 (1967).

2. P. Ehrlich, *The Population Bomb* (1968).

3. National Staff of Environmental Action, *Earth Day—The Beginning* (1970).

4. 6 *Weekly Compilation of Presidential Documents* 63 (1970).

5. 42 U.S.C. § 4321 *et seq.* (1971).

6. Reorganization Plan No. 3 of 1970, 35 Fed. Reg. 15623, 42 U.S.C. § 4321 (1971).

7. 42 U.S.C. § 4901 *et seq.* (Supp. II, 1973).

8. 49 U.S.C. § 1431(c)(1) (Supp. II, 1973).

9. Cal. Pub. Resources Code § 21000 *et seq.* (West Supp. 1975).

10. *Friends of Mammoth v. Board of Supervisors of Mono County*, 8 Cal. 3d 247, 502 P.2d 1049 (1972).

11. Cal. Gov. Code § 65302 (West Supp. 1975).

12. Cal. Gov. Code § 12605 (West Supp. 1975).

13. The Department of Aeronautics became the Division of Aeronautics within the newly formed Department of Transportation on July 1, 1973. See Cal. Pub. Utilities Code §§ 21006.5 and 21007 (West Supp. 1975); see also Cal. Gov. Code § 14008 (West Supp. 1975). To avoid confusion, this entity will be referred to throughout as the "Division" of Aeronautics.

14. Cal. Pub. Utilities Code § 21669 *et seq.* (West Supp. 1975). See also Cal. Health and Safety Code §§ 24180-24181 (West Supp. 1975).

15. Cal. Pub. Utilities Code § 21670 *et seq.* (West Supp. 1975).

16. Cal. Gov. Code § 65302(g) (West Supp. 1975).

17. Subsequently, in 1973, the legislature in the Noise Control Act of 1973 created an Office of Noise Control. Cal. Health and Safety Code § 39840 (West 1973). Although the director of this office, a part of the Department of Health, is to promote coordination of the programs of all state agencies relating to noise research, abatement, prevention, and control, Cal. Health and Safety Code § 39870, to date the office has had no significant role with regard to airport noise problems.

18. The author initially suggested to the Environmental Protection Agency that information be gathered with regard to the implementation experience at Los Angeles International Airport, Orange County Airport, San Francisco International Airport, San Jose Municipal Airport and the Metropolitan Oakland International Airport. At the request of the Environmental Protection Agency the Los Angeles International Airport was deleted from this list and San Diego's Lindbergh Field, the Ontario International Airport and the Sacramento Metropolitan Airport were added to the list.

    Investigation at the Sacramento Metropolitan Airport yielded very little of value for this report. The airport is located in an agricultural area, it has not been determined by Sacramento County to have a noise problem, nor is there in fact any basis for an assertion that the airport has a noise problem. The airport has no plans for a noise monitoring system. Further, there is presently insufficient development pressure on land around the airport now devoted to agriculture to be able to judge the long-term effectiveness of land use control measures designed to ensure compatible uses in the airport's impact zone. Consequently, the airport presents little by way of "implementation experience" to be described and analyzed.

19. Cal. Pub. Utilities Code § 21669 (West Supp. 1975).

20. Cal. Pub. Utilities Code § 21669.4(b) (West Supp. 1975).

21. Cal. Pub. Utilities Code § 21669.4(a) (West Supp. 1975).

22. Cal. Pub. Utilities Code § 21669.5(a) (West Supp. 1975). This limitation originated in the Noise Standards, 4 Cal. Admin. Code § 5004, and was added to the statute in 1971. The statutory version of the limitation expired, however, early in 1975, Cal. Pub. Utilities Code § 21669.5(c) (West Supp. 1975), after efforts to extend it were unsuccessful. See Assembly Bill 4426, 1973-74 Regular Session. For an argument that the limitation as created by the Noise Standards is invalid, see Comment, "We May Yet Have a Quiet Environment: The New California Airport Noise Regulations," 12 *Santa Clara L. Rev.* 79, 91-92 (1972).

23. Cal. Pub. Utilities Code § 21669.1, repealed by Cal. Stats. 1972, ch. 618, § 130.

24. Cal. Pub. Utilities Code § 21669.2 (West Supp. 1975).

25. Cal. Pub. Utilities Code § 21669.3(a) (West Supp. 1975).

26. Cal. Stats. 1969, ch. 1585, § 4.

27. The consulting firm was Wyle Laboratories of El Segundo, California. See Wyle Laboratories Research Staff, "Supporting Information for the Adopted Noise Regulations For California Airports" (1971).

28. 4 Cal. Admin. Code § 5000 *et seq.*

29. 4 Cal. Admin. Code § 5000.

30. Cal. Pub. Utilities Code § 21669 (West Supp. 1975).

31. 4 Cal. Admin. Code § 5005.

32. Id.

33. 4 Cal. Admin. Code § 5006(f).

34. 4 Cal. Admin. Code § 5006(g).

35. 4 Cal. Admin. Code § 5006(h).

36. 4 Cal. Admin. Code § 5050(b).

37. 4 Cal. Admin. Code § 5013 and §§ 5020-5025.

38. 4 Cal. Admin. Code § 5005.

39. 4 Cal. Admin. Code § 5012(a).

40. See, e.g., 4 Cal. Admin. Code § 5075(a).

41. See Division of Aeronautics, "Questions Commonly Asked Regarding Requirements Of The Counties Relative To The Noise Standards For California Airports, Title 4, Sub-Chapter 6, California Administrative Code," No. 15 (undated): ". . . Section 5012 was amended to include the sliding scale CNEL limitations after Section 5075 was written . . . ."

42. 4 Cal. Admin. Code § 5012(c).

43. 4 Cal. Admin. Code § 5014.

44. 4 Cal. Admin. Code § 5006(i).

45. 4 Cal. Admin. Code § 5062.

46. 4 Cal. Admin. Code § 5075(b)(3).

47. 4 Cal. Admin. Code § 5070(b).

48. When Section 5070(b) is read with the provisions governing the request for a variance, 4 Cal. Admin. Code § 5075(b), it appears however that no variance is required if an airport which has been determined to have a noise problem can be operated in compliance with all requirements of the Noise Standards.

49. 4 Cal. Admin. Code § 5035.

50. 4 Cal. Admin. Code § 5045(a)(1).

51. 4 Cal. Admin. Code § 5035 and Figures 3A and 3B.

52. 4 Cal. Admin. Code § 5035.

53. Cal. Pub. Utilities Code § 21669.4 (West Supp. 1975); 4 Cal. Admin. Code § 5055.

54. Air Transport Association of America v. Crotti, 389 F. Supp. 58, 65 (1975).

55. Id. at 65.

56. Id. at 64-65.

57. The court in ATA v. Crotti based its denial of summary judgment as to the CNEL aspects of the Noise Standards upon the airport's "proprietary control," which "necessarily includes the basic right to determine the type of air service a given airport proprietor wants its facilities to provide, as well as the type of aircraft to utilize those facilities." Id. at 64. This proprietary power was found to have been "exempted from judicially declared federal pre-emption by footnote 14" of City of Burbank v. Lockheed Air Terminal, 411 U.S. 624 (1973), id., and it was seen as correlative to the airport proprietor's liability for the consequences which attend his operation of a public airport. Id. at 63-64. The court did not consider what limits, if any, apply to the CNEL provisions, although it termed the provision suggesting reduction of flight frequency as a method for controlling the impact of airport noise "suspect." Id. at 65. Jurisdiction was reserved for the determination of appropriate CNEL issues, and at present it appears the matter may go to trial in the near future.

58. 4 Cal. Admin. Code § 5050 (b).

59. Cal. Pub. Utilities Code § 21669.2(a) (West Supp. 1975).

60. 4 Cal. Admin. Code § 5050(b).

61. 4 Cal. Admin. Code § 5070(a).

62. 4 Cal. Admin. Code § 5050(c).

63. Id.

64. See Department of Aeronautics, "Report of Investigation and Determination Regarding Designation of Noise Problem at Fullerton Airport" (October 18, 1972). On appeal Orange County's determination that there is no noise problem at the Fullerton Airport was affirmed.

65. The other five airports determined to have a noise problem are Los Angeles International, Long Beach, Santa Ana, Hollywood-Burbank and Santa Monica.

66. Daniel, Mann, Johnson & Mendenhall, Noise Impact Assessment for San Diego County Airports (1972).

67. 4 Cal. Admin. Code § 5070.

68. Cal. Pub. Utilities Code § 21669.3(c) (West Supp. 1975).

69. Letter from Thomas G. Bertken, Deputy Director of Airports to Richard Dyer, January 24, 1972.

70. Letter from James K. Carr, Director of Airports, to Joseph R. Crotti, February 28, 1972.

71. Letter from Joseph R. Crotti to James K. Carr, March 30, 1972.

72. Letter from Thomas G. Bertken to Joseph R. Crotti, November 21, 1972.

73. Letter from Joseph R. Crotti to Thomas G. Bertken, November 30, 1972.

74. Letter from Thomas G. Bertken to Joseph R. Crotti, May 29, 1974.

75. *Id.*

76. Letter from William F. Shea to Thomas G. Bertken, June 12, 1974. The April 1, 1975, deadline was not met, and the airport has submitted an application for still another variance. At present, the equipment for the airport's noise monitoring system has been fabricated and site preparation is underway. Installation will proceed in July and currently the airport anticipates an operational system by the end of August 1975. Telephone interview with Donald Bier, June 5, 1975.

77. *Id.*

78. *Id.*

79. Letter from Thomas G. Bertken to Joseph R. Crotti, May 29, 1974.

80. Cal. Pub. Utilities Code § 21669.3(c) (West Supp. 1975).

81. Letter from Thomas G. Bertken to Fred E. Tarr, May 29, 1974.

82. Letter from Thomas G. Bertken to Joseph R. Crotti, May 29, 1974.

83. 4 Cal. Admin. Code § 5075(b)(6).

84. Daniel, Mann, Johnson & Mendenhall, *supra* note 66.

85. Bolt, Beranek & Newman, *Development of an Aircraft Noise Monitoring Plan for Lindbergh Field, San Diego* (1972).

86. The Noise Standards require at least twelve monitoring stations along the noise impact boundary. 4 Cal. Admin. Code § 5021. The consultant suggested that approval for a variance from this requirement be sought on the ground that most of the noise impact area is in a small zone to the east of the airport, flight paths are well defined at Lindbergh Field because there is only one runway, and the system provides for expansion if necessary at a later time.

87. "Contract between the City of Los Angeles and the City of Ontario for the Joint Exercise of Powers in relation to Ontario International Airport," October 18, 1967.

88. *Id.* at § 8.

89. The contract provides that the Los Angeles Department of Airports "shall manage, operate and control ONT, in the manner and with all the powers and duties provided by the Charter of the City of Los Angeles for its operation of LAX." *Id.* at § 7.

90. *Id.* at § 3.

91. Interview with Clifton Moore, Director of the Los Angeles Department of Airports, August 1, 1974.

92. Letter from Robert Smith, Chairman, Community Relations Commission, to California Department of Aeronautics, August 6, 1973.

93. Letter from William F. Shea to Robert Smith, September 14, 1973.

94. *Id.*

95. Cal. Pub. Utilities Code § 21663 (West Supp. 1975).

96. Cal. Pub. Utilities Code § 21668(d) (West Supp. 1975).

97. Cal. Pub. Utilities Code § 21669.4(b) (West Supp. 1975).

98. Cal. Pub. Utilities Code § 21669.2(a) (West Supp. 1975).

99. 4 Cal. Admin. Code § 5063.

100. Division of Aeronautics, *supra* note 41, at No. 12.

101. 4 Cal. Admin. Code § 5065.

102. *Id.*

103. Letter from William F. Shea to Robert S. Goodman, September 14, 1973.

104. *Id.*

105. Letter from William F. Shea to Bert J. Lockwood, September 26, 1973.

106. *Id.*

107. See pages 65-67 *infra*.

108. Interview with Robert Goodman, Director, San Bernardino County Department of Airports, July 10, 1974.

109. Alameda County Board of Supervisors, Resolution, June 13, 1972.

110. Minutes of the Alameda County Airport Land Use Commission, May 10, 1972.

111. *Id.*

112. 4 Cal. Admin. Code § 5031.

113. 4 Cal. Admin. Code § 5022(a).

114. *Id.*

115. See Port of Oakland Board of Port Commissioners, "Noise Abatement Policy for the North Field," January 16, 1974.

116. See page 11 *supra*.

117. *Id.*

118. 4 Cal. Admin. Code § 5035.

119. *Id*.

120. With the exception of April 3, 1974, through May 6, 1974, when the system was out of service for calibration and no data were obtained.

121. See "Preliminary Analysis of Noise Abatement Takeoff Procedures Adopted by Hughes Airwest October 4, 1974," an appendix to R. Bresnahan, *Noise Abatement Program Quarterly Report For the Period October 1, 1974, through December 31, 1974* (February 15, 1975).

122. Cal. Pub. Utilities Code § 21669.4(a) (West Supp. 1975).

123. See page 11 *supra*.

124. Tentatively a fee schedule of $30 for noisy daytime departures, $60 for noisy evening departures and $90 for noisy night time departures was contemplated by airport personnel. The County Counsel, however, responded negatively to this proposal, which is not included in the current Master Plan of Noise Abatement. "Response from the County Counsel was withheld because of the questionable constitutionality of the State Noise Standards. The general concern is that the proposal will prove unworkable and unenforceable." R. Bresnahan, *supra* note 121, at 26. In view of the comments on the existence of an airport's proprietary power which were included in *ATA v. Crotti*, *supra* note 57, it appears that airport-initiated noise-related graduated user fees would pass constitutional muster.

125. 4 Cal. Admin. Code § 5012.

126. Community Airport Council, *Newsletter* 3 (May 1, 1974).

127. *Id*. More recent reports indicate that the 1974 noise impact area included 212 acres and 271 homes. R. Bresnahan, *supra* note 121, at 13. This increase, however, is stated not to be due to any increase in noise levels. "It is due to information gained from new Monitor Stations M-6 and M-7; which indicate that sideline noise levels are higher than previously estimated." *Id*. at 9.

128. Census tract data for 1970 for airport area census tracts show that for Ontario the median family income was $9,617, the mean family income was $10,271, and the mean value of an owner occupied house was $17,100. The comparable figures for Newport Beach are $16,436 for median family income, $20,507 for mean family income, and $49,000 for mean value of an owner occupied house. These figures are for census tracts 11, 16, 17 and 18 in Ontario and for census tracts 627, 629, 630.01, 630.02 and 631.01 in Newport Beach.

129. The airport's environmental impact report on the acquisition program notes that the properties to be acquired are in a noise-sensitive area, where "there is not much of a real estate market," San Jose Municipal Airport, City of San Jose, *Environmental Impact Report: San Jose Municipal Airport - Land Acquisition Approach Zone* 17-18 (June 1974), but where there are numerous noise complaints. *Id*. at

19. Elimination of noise sensitive residential land use is identified as a secondary purpose of the program. Id. at 1.

130. A limited survey to provide some basis for evaluation of the visual display was conducted between August 28, 1974, and September 1, 1974. During the survey periods approximately 5,844 non-airport-related individuals passed the display room. Of these, only 54 - less than 1% - stopped to view the visual display. Of these, 29 consented to complete survey forms. A majority of these respondents indicated in their responses that they found the display materials "easily understandable," but 22 of 29 indicated greater effort should be made to attract attention to the display and 17 of 29 indicated that the display did not satisfy their curiosity about the noise monitoring program.

131. 4 Cal. Admin. Code § 5011.

132. The Noise Standards require an incremental schedule only in the situation of a variance to operate with a noise impact area greater than zero. 4 Cal. Admin. Code § 5075(b)(3). In all cases, however, the applicant will be judged by whether bona fide measures to achieve compliance are being taken. Id. at § 5075(b)(4)(D). Presumably this requires applicants in all cases to establish the nature of the noise abatement methodology being utilized.

133. See pages 49-54 infra.

134. The following description is based largely upon M. Garbell, "City Planning and Airport Planning for Community Noise Abatement at the City of South San Francisco, California" (May 11, 1974).

135. Operations personnel at the San Jose Municipal Airport prefer the term "low drag approach" over the term "two segment approach," since the procedure at San Jose is not fully instrumented. Interview with Jerome T. Bennett and Robert J. Young, August 1974.

136. Id.

137. Id.

138. See pages 35-41 supra.

139. For the full list of elements in this program, plus a progress report on its implementation, see R. Bresnahan, supra note 121, at 21-28. This report is highly recommended as an example of the sort of site specific airport noise abatement program which the Noise Standards aim to produce. It is authored by the Director of Aviation, 18741 North Airport Way, Santa Ana, California 92707.

140. See attachment to memorandum from Edward J. Connor, Jr. to Nicholas C. Yost, May 17, 1974. The attorney who represented the Department of Transportation in the variance proceeding commented that, in light of the evidence presented to the hearing on the preferential runway system and its termination by the Orange County Board of Supervisors, "we concluded that any variance issued should address these problems by the imposition of conditions. I personally feel that, under the

evidence, we cannot do otherwise. If the intent of the regulations is to be followed, it would seem that any approval of a variance should be conditioned by some kind of a requirement of renewed effort in these areas." Id. at 1.

141. R. Neher, Proposed Decision in In The Matter of the Statement of Issues v. County of Orange, Case No. L-5628 (April 29, 1974.)

142. The order stated the following: "During the term [of the one year variance], respondent shall utilize a preferential runway program for jet departures to the north when its tower is manned, and wind and safety conditions permit." Id. at 5. Note there was no limitation to "good faith efforts."

143. Id.

144. Id. at 4.

145. Id. at 3.

146. Memorandum from Fred Lemke to William F. Shea, May 22, 1974.

147. 411 U.S. 624 (1973), 93 S. Ct. 1854, 36 L. Ed. 2d 547 (1973).

148. Joseph R. Crotti, Decision in In the Matter of the Statement of Issues v. County of Orange, Case No. L-5628 (November 4, 1974).

149. Id. at 10.

150. Id. at 10-11.

151. R. Bresnahan, supra note 121, at 29-30.

152. Id. at "abstract."

153. Id.

154. 4 Cal. Admin. Code § 5011(f).

155. Id.

156. Cal. Pub. Utilities Code § 21670 et seq.(West Supp. 1975).

157. Cal. Stats. 1967, ch. 852, § 1, as amended Cal. Pub. Utilities Code § 21670 (West Supp. 1975).

158. Cal. Pub. Utilities Code § 21670 (West Supp. 1975).

159. Cal. Pub. Utilities Code § 21675 (West Supp. 1975).

160. Cal. Pub. Utilities Code § 21675(a) (West Supp. 1975).

161. Cal. Pub. Utilities Code § 21005 (West Supp. 1975). Significantly, the 1971 legislation anticipated an ALUC role for the Division of Aeronautics, for it provided that ALUCs "shall require that all new construction in such areas shall conform to such standards as the

department [division] may from time to time adopt." Id. In 1973 the division in fact proposed standards for ALUCs, both with regard to new construction in the vicinity of airports and with regard to other ALUC matters. Division of Aeronautics, "Airport Land Use Commission Proposed Standards" (April 6, 1973). Although the division stated that the adoption of ALUC standards is "required" by law, Notice from Joseph R. Crotti, "Comments Requested on Proposed Airport Land Use Standards" (April 19, 1973), after several adverse comments were received the matter was dropped and no ALUC standards have been published. Within the past six months the division has sponsored two workshops for ALUC commissioners, which may indicate it will be taking a more active role on ALUC matters in the future.

162. Cal. Pub. Utilities Code § 21670 (West Supp. 1975).

163. Cal. Pub. Utilities Code § 21670.1 (West Supp. 1975). Such a determination required a majority vote of both the county board of supervisors and the selection committee of mayors.

164. Cal. Stats. 1967, ch. 852, § 1, as amended Cal. Pub. Utilities Code § 21671.5 (West Supp. 1975).

165. Id.

166. Cal. Pub. Utilities Code § 21671.5 (West Supp. 1975).

167. Cal. Pub. Utilities Code § 21674 (West Supp. 1975).

168. Cal. Pub. Utilities Code § 21005 (West Supp. 1975).

169. In addition, the 1970 legislation on ALUC land use plans shows sensitivity to noise problems in authorizing the ALUC to "determine building standards, including soundproofing adjacent to airports...." Cal. Pub. Utilities Code § 21675 (West Supp. 1975).

170. Id.

171. Id.

172. Cal. Pub. Utilities Code § 21676 (West Supp. 1975).

173. Id.

174. Cal. Pub. Utilities Code § 21675 (West Supp. 1975).

175. Id.

176. Cal. Pub. Utilities Code § 21005 (West Supp. 1975).

177. Id.

178. Id.; see also Cal. Pub. Utilities Code § 21675 (West Supp. 1975).

179. See Cal. Pub. Utilities Code § 21676 (West Supp. 1975).

180. Cal. Pub. Utilities Code § 21674 (West Supp. 1975).

181. Cal. Pub. Utilities Code § 21676 (West Supp. 1975).

182. *Id.*

183. *Id.*

184. *Id.*

185. Santa Clara County Airport Land Use Commission, *Land Use Plan for Area Surrounding Santa Clara County Airports* (August 1973).

186. *Id.* at 1.

187. *Id.* at 3

188. *Id.* at 30-33.

189. *Id.* at 8.

190. 4 Cal. Admin. Code § 5011.

191. Santa Clara County Airport Land Use Commission, *supra* note 185, at 14.

192. *City of Oakland v. City of Alameda*, No. 453290-3, Order on Motion for Summary Judgment (Super. Ct., Alameda County, March 4, 1975). Another ground for the order was that no environmental impact report was prepared by the ALUC upon its plans and actions.

193. San Bernardino County Planning Department, *Airport Impact* 48 (1970).

194. Cal. Pub. Utilities Code § 21676 (West Supp. 1975).

195. 4 Cal. Admin. Code § 5014(g).

196. 25 Cal. Admin. Code § 1092.

197. Arthur D. Little, Inc., *Harbor Bay Isle: A Residential/Industrial Development on Bay Farm Island, City of Alameda - Environmental Impact Report (Draft)* (November 21, 1973). This report provides an excellent review of the positions of the groups in conflict over this development. See also the final environmental impact report, Arthur D. Little, Inc., *Harbor Bay Isle: A Residential/Industrial Development on Bay Farm Island, City of Alameda - Environmental Impact Report* (January 18, 1974).

198. *Id.* (draft) at IV-117.

199. *Id.* at IV-120.

200. *Id.* at IV-124.

201. *Id.* at IV-122.

202. This is shown in the RASSC study as a NEF 30 decibel line.

203. Alameda County Airport Land Use Commission, *Resolution* (April 12, 1972).

204. Interview with Commissioner Shirley, August 1974.

205. Alameda County Airport Land Use Commission, *Resolution* (October 10, 1973).

206. *Id.*

207. See *supra* note 192 and the accompanying text.

208. Cal. Gov. Code § 65302 (West Supp. 1975).

209. Cal. Gov. Code § 65302(g) (West Supp. 1975).

210. *Id.*

211. *Id.*

212. Cal. Gov. Code § 65860 (West Supp. 1975).

213. Cal. Gov. Code § 65361 (West Supp. 1975).

214. City of Irvine, Noise Element of the General Plan, penultimate page (1974).

215. Cal. Gov. Code § 65302 (West Supp. 1975).

216. *Id.*